Higher Education for American Democracy

VOLUME I

Establishing the Goals

A REPORT OF THE
PRESIDENT'S COMMISSION ON
HIGHER EDUCATION

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Washington, December 1947

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Letter of Transmittal

THE PRESIDENT'S COMMISSION ON HIGHER EDUCATION

WASHINGTON, D. C., *December 11, 1947.*

DEAR MR. PRESIDENT:

On July 13, 1946, you established the President's Commission on Higher Education and charged its members with the task of examining the functions of higher education in our democracy and the means by which they can best be performed.

The Commission has completed its task and submits herewith a comprehensive report "Higher Education for American Democracy." The magnitude of the issues involved prompted the Commission to incorporate its findings and recommendations in a series of six volumes of which this is the first.

The Commission members and the staff are grateful for the opportunity which you have given us to explore so fully the future role of higher education which is so closely identified with the welfare of our country and of the world.

Respectfully yours,

GEORGE F. ZOOK,
Chairman.

The Honorable
The PRESIDENT OF THE UNITED STATES.

President's Commission on Higher Education

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FRANCIS J. BROWN, *Executive Secretary*

A. B. BONDS, JR., *Assistant Executive Secretary*

Letter of Appointment of Commission Members

THE WHITE HOUSE

WASHINGTON, D. C., *July 13, 1946.*

DEAR ——— ———:

As veterans return to college by the hundreds of thousands, the institutions of higher education face a period of trial which is taxing their resources and their resourcefulness to the utmost. The Federal Government is taking all practicable steps to assist the institutions to meet this challenge and to assure that all qualified veterans desirous of continuing their education have the opportunity to do so. I am confident that the combined efforts of the educational institutions, the States, and the Federal Government will succeed in solving these immediate problems.

It seems particularly important, therefore, that we should now reexamine our system of higher education in terms of its objectives, methods, and facilities; and in the light of the social role it has to play.

These matters are of such far-reaching national importance that I have decided to appoint a Presidential Commission on Higher Education. This Commission will be composed of outstanding civic and educational leaders and will be charged with an examination of the functions of higher education in our democracy and of the means by which they can best be performed. I should like you to serve on this body.

Among the more specific questions with which I hope the Commission will concern itself are: ways and means of expanding educational opportunities for all able young people; the adequacy of curricula, particularly in the fields of international affairs and social understanding; the desirability of establishing a series of intermediate technical institutes; the financial structure of higher education with particular reference to the requirements for the rapid expansion of physical facilities. These topics of inquiry are merely suggestive and not intended to limit in any way the scope of the Commission's work.

I hope that you will find it possible to serve on this Commission.

Very sincerely yours,

Harry Truman

Acknowledgments

The Commission gratefully acknowledges the enthusiastic cooperation and the invaluable assistance it has received from educational institutions and from individuals, organizations, and agencies both in and out of Government.

Dr. John R. Steelman, the Assistant to the President, in his official capacity as liaison between the various agencies of Government and the Commission took a deep and personal interest in its work.

Dr. J. Donald Kingsley, formerly Program Coordinator in the White House office was extremely helpful in the initial development of the scope and content of the Commission's program. Acknowledgment is also due to John L. Thurston of Dr. Steelman's office for his work in forwarding the activities of the Commission.

Almost every agency and department of Government assisted the Commission in its task. Special appreciation is expressed to the United States Office of Education, the Bureau of the Census, the Bureau of Labor Statistics, the Department of the Army and the Department of the Navy, the Department of Agriculture, and the Bureau of the Budget.

Through the cooperation of the American Council of Learned Societies, the American Council on Education, the National Research Council, and the Social Science Research Council, a special study was made of the faculties of thirty colleges and universities. The American Association of University Professors cooperated in extending the study of faculty personnel to members of its local chapters. The Association of Land Grant Colleges and Universities conducted a special survey of the extensive activities of its member institutions. At the request of the Commission more than 50 professional and lay organizations submitted statements, or assembled data of much value.

Institutions of higher education and State Departments of Education in every State gladly and promptly supplied information requested by the Government Agencies through which the Commission carried on much of its research activities.

This demonstration of cooperation reflects the deep public awareness of the problems which face higher education, and is a matter of much gratification to the Commission. It is hoped that these cooperative relationships may, in themselves, suggest a pattern for the continuing cooperation of individuals, organizations, Government agencies, and institutions interested in the future welfare of higher education in America.

Dr. Newton Edwards, Professor of Education at the University of Chicago, served as Consultant to the Commission in the preparation of this volume.

The Commission is especially indebted to the members of its staff for the loyal, persevering and intelligent way in which they have served the Commission. Dr. Francis J. Brown, Executive Secretary, and Alfred B. Bonds, Jr., Assistant Executive Secretary, deserve special mention.

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PREFACE

The Task of This Commission

The President's Commission on Higher Education has been charged with the task of defining the responsibilities of colleges and universities in American democracy and in international affairs—and, more specifically, with reexamining the objectives, methods, and facilities of higher education in the United States in the light of the social role it has to play.

The colleges and universities themselves had begun this process of reexamination and reappraisal before the outbreak of World War II. For many years they had been healthily dissatisfied with their own accomplishments, significant though these have been. Educational leaders were troubled by an uneasy sense of shortcoming. They felt that somehow the colleges had not kept pace with changing social conditions, that the programs of higher education would have to be repatterned if they were to prepare youth to live satisfyingly and effectively in contemporary society.

One factor contributing to this sense of inadequacy has been the steadily increasing number of young people who seek a college education. As the national economy became industrialized and more complex, as production increased and national resources multiplied, the American people came in ever greater numbers to feel the need of higher education for their children. More and more American youth attended colleges and universities, but resources and equipment and curriculum did not keep pace with the growing enrollment or with the increasing diversity of needs and interests among the students.

World War II brought a temporary falling off in enrollment, but with the war's end and the enactment of Public Laws 16 and 346, the "Veterans' Rehabilitation Act," and "The G. I. Bill of Rights," the acceleration has resumed. The increase in numbers is far beyond the capacity of higher education in teachers, in buildings, and in equipment. Moreover, the number of veterans availing themselves of veterans' educational benefits falls short of the numbers that records of military personnel show could benefit from higher education. Statistics reveal that a doubling of the 1947–48 enrollment in colleges and universities will be entirely possible within 10 to 15 years, if facilities and financial means are provided.

This tendency of the American people to seek higher education in ever greater numbers has grown concurrently with an increasingly critical need for such education. To this need several developments have contributed:

(a) Science and invention have diversified natural resources, have multiplied new devices and techniques of production. These have altered in radical ways the interpersonal and intergroup relations of Americans in their work, in their play, and in their duties as citizens. As a consequence, new skills and greater maturity are required of youth as they enter upon their adult roles. And the increasing complexity that technological progress has brought to our society has made a broader understanding of social processes and problems essential for effective living.

(b) The people of America are drawn from the peoples of the entire world. They live in contrasting regions. They are of different occupations, diverse faiths, divergent cultural backgrounds, and varied interests. The American Nation is not only a union of 48 different States; it is also a union of an indefinite number of diverse groups of varying size. Of and among these diversities our free society seeks to create a dynamic unity. Where there is economic, cultural, or religious tension, we undertake to effect democratic reconciliation, so as to make of the national life one continuous process of interpersonal, intervocational, and intercultural cooperation.

(c) With World War II and its conclusion has come a fundamental shift in the orientation of American foreign policy. Owing to the inescapable pressure of events, the Nation's traditional isolationism has been displaced by a new sense of responsibility in world affairs. The need for maintaining our democracy at peace with the rest of the world has compelled our initiative in the formation of the United Nations, and America's role in this and other agencies of international cooperation requires of our citizens a knowledge of other peoples—of their political and economic systems, their social and cultural institutions—such as has not hitherto been so urgent.

(d) The coming of the atomic age, with its ambivalent promise of tremendous good or tremendous evil for mankind, has intensified the uncertainties of the future. It has deepened and broadened the responsibilities of higher education for anticipating and preparing for the social and economic changes that will come with the application of atomic energy to industrial uses. At the same time it has underscored the need for education and research for the self-protection of our democracy, for demonstrating the merits of our way of life to other peoples.

Thus American colleges and universities face the need both for improving the performance of their traditional tasks and for assuming

the new tasks created for them by the new internal conditions and external relations under which the American people are striving to live and to grow as a free people.

It is against the background of these conditions that the President's Commission has been called upon to reexamine higher education in the United States. In doing this, the Commission has undertaken to appraise our most urgent national needs, to define in terms of those needs the major goals toward which higher education should move, and to indicate certain changes in educational policy and program which it considers necessary for the attainment of these goals.

A total of six volumes will be issued by the Commission under the general title, "Higher Education for American Democracy."

This volume, "Establishing the Goals," sets the general pattern for the entire report.

Volume 2, "Equalizing and Expanding Individual Opportunity," is concerned with the barriers to equal opportunity for higher education and with the means of removing them.

Volume 3, "Organizing Higher Education," presents an appraisal of organizational problems at the national, State, and local levels.

Volume 4, "Staffing Higher Education," is the Commission's recommendation for a greatly expanded and improved program for the preparation and in-service education of faculty personnel.

Volume 5, "Financing Higher Education," is an appraisal of fiscal needs and policies necessary for the program of higher education recommended by the Commission.

Volume 6, "Resource Data," is a compilation of some of the basic information used by the Commission in preparing its reports.

Education for a Better Nation and a Better World

Education is an institution of every civilized society, but the purposes of education are not the same in all societies. An educational system finds its guiding principles and ultimate goals in the aims and philosophy of the social order in which it functions. The two predominant types of society in the world today are the democratic and the authoritarian, and the social role of education is very different in the two systems.

American society is a democracy: that is, its folkways and institutions, its arts and sciences and religions are based on the principle of equal freedom and equal rights for all its members, regardless of race, faith, sex, occupation, or economic status. The law of the land, providing equal justice for the poor as well as the rich, for the weak as well as the strong, is one instrument by which a democratic society establishes, maintains, and protects this equality among different persons and groups. The other instrument is education, which, as all the leaders in the making of democracy have pointed out again and again, is necessary to give effect to the equality prescribed by law.

THE ROLE OF EDUCATION

It is a commonplace of the democratic faith that education is indispensable to the maintenance and growth of freedom of thought, faith, enterprise, and association. Thus the social role of education in a democratic society is at once to insure equal liberty and equal opportunity to differing individuals and groups, and to enable the citizens to understand, appraise, and redirect forces, men, and events as these tend to strengthen or to weaken their liberties.

In performing this role, education will necessarily vary its means and methods to fit the diversity of its constituency, but it will achieve its ends more successfully if its programs and policies grow out of

and are relevant to the characteristics and needs of contemporary society. Effective democratic education will deal directly with current problems.

This is not to say that education should neglect the past—only that it should not get lost in the past. No one would deny that a study of man's history can contribute immeasurably to understanding and managing the present. But to assume that all we need do is apply to present and future problems "eternal" truths revealed in earlier ages is likely to stifle creative imagination and intellectual daring. Such an assumption may blind us to new problems and the possible need for new solutions. It is wisdom in education to use the past selectively and critically, in order to illumine the pressing problems of the present.

At the same time education is the making of the future. Its role in a democratic society is that of critic and leader as well as servant; its task is not merely to meet the demands of the present but to alter those demands if necessary, so as to keep them always suited to democratic ideals. Perhaps its most important role is to serve as an instrument of social transition, and its responsibilities are defined in terms of the kind of civilization society hopes to build. If its adjustments to present needs are not to be mere fortuitous improvisations, those who formulate its policies and programs must have a vision of the Nation and the world we want—to give a sense of direction to their choices among alternatives.

What America needs today, then, is "a schooling better aware of its aims." Our colleges need to see clearly what it is they are trying to accomplish. The efforts of individual institutions, local communities, the several States, the educational foundations and associations, and the Federal Government will all be more effective if they are directed toward the same general ends.

In the future as in the past, American higher education will embody the principle of diversity in unity: each institution, State, or other agency will continue to make its own contribution in its own way. But educational leaders should try to agree on certain common objectives that can serve as a stimulus and guide to individual decision and action.

A TIME OF CRISIS

It is essential today that education come decisively to grips with the world-wide crisis of mankind. This is no careless or uncritical use of words. No thinking person doubts that we are living in a decisive moment of human history.

Atomic scientists are doing their utmost to make us realize how easily and quickly a world catastrophe may come. They know the

fearful power for destruction possessed by the weapons their knowledge and skill have fashioned. They know that the scientific principles on which these weapons are based are no secret to the scientists of other nations, and that America's monopoly of the engineering processes involved in the manufacture of atom bombs is not likely to last many years. And to the horror of atomic weapons, biological and chemical instruments of destruction are now being added.

But disaster is not inevitable. The release of atomic energy that has brought man within sight of world devastation has just as truly brought him the promise of a brighter future. The potentialities of atomic power are as great for human betterment as for human annihilation. Man can choose which he will have.

The possibility of this choice is the supreme fact of our day, and it will necessarily influence the ordering of educational priorities. We have a big job of reeducation to do. Nothing less than a complete reorientation of our thinking will suffice if mankind is to survive and move on to higher levels.

In a real sense the future of our civilization depends on the direction education takes, not just in the distant future, but in the days immediately ahead.

This crisis is admittedly world-wide. All nations need reeducation to meet it. But this fact does not lessen the obligation of colleges and universities to undertake the task in the United States. On the contrary, our new position in international affairs increases the obligation. We can do something about the problem in our own country and in occupied areas, and hope that by so doing we will win the friendly cooperation of other nations.

The fundamental goal of the United States in its administration of occupied areas must be the reeducation of the populations to the individual responsibilities of democracy. Such reeducation calls for the immediate removal of authoritarian barriers to democratic education, and inculcation of democratic ideals and principles through the guidance, example, and wisdom of United States occupation forces. The primacy of the objective of reeducation, however, appears too often to have been lost sight of in the press of day-to-day administrative problems. Yet every contact by Americans with Germans or Japanese either strengthens or retards the achievement of the goal. Evidence reaching this Commission indicates that while many specific existing barriers to democratic reform have been removed, new obstacles are being created daily by inadequacies of educational personnel and policy. Cognizant of the great responsibility of American education to promote democratic ideals in occupied areas, this Commission recommends the formation of a special committee to appraise

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progress and offer advice to the Departments of State and National Defense on educational policy and administration in occupied areas.

The schools and colleges are not solely or even mainly to blame for the situation in which we find ourselves, or that the responsibility for resolving the crisis is not or can not be entirely theirs. But the scientific knowledge and technical skills that have made atomic and bacteriological warfare possible are the products of education and research, and higher education must share proportionately in the task of forging social and political defenses against obliteration. The indirect way toward some longer view and superficial curricular tinkering can no longer serve. The measures higher education takes will have to match in boldness and vision the magnitude of the problem.

In the light of this situation, the President's Commission on Higher Education has attempted to select, from among the principal goals for higher education, those which should come first in our time. They are to bring to all the people of the Nation:

Education for a fuller realization of democracy in every phase of living.

Education directly and explicitly for international understanding and cooperation.

Education for the application of creative imagination and trained intelligence to the solution of social problems and to the administration of public affairs.

TOWARD A FULLER REALIZATION OF DEMOCRACY

The dramatic events of the last few years have tended to focus our attention on the need for a world view, for global vision, for international-mindedness. This is an urgent necessity, but it would be unwise to let this necessity blind us to the fact that America's leadership in world affairs can be effective only as it rests upon increasing strength and unity at home.

Understanding Among Men

Harmony and cooperation among peoples of differing races, customs, and opinions is not one thing on the regional or national level and another on the international. The problem of understanding among men is indivisible, and the mutual acceptance and respect upon which any reliable international cooperation must depend, begin at home.

If we cannot reconcile conflicts of opinion and interest among the diverse groups that make up our own Nation, we are not likely to succeed in compromising the differences that divide nations. If we cannot make scientific and technological progress contribute to the greater well-being of all our own citizens, we shall scarcely be able to exercise leadership in reducing inequality and injustice among the other peoples

of the world. If we cannot achieve a fuller realization of democracy in the United States, we are not likely to secure its adoption willingly outside the United States.

A century ago even political thinkers who did not approve the trend toward democracy accepted its eventual triumph as inevitable. Today we cannot be so sure that the future of the democratic way of life is secure. Within recent decades democratic principles have been dangerously challenged by authoritarianism, and World War II did not by any means resolve the conflict. The issue of a free society versus totalitarianism is still very much with us. It has been called "the critical and supreme political issue of today."

It is the American faith that the ultimate verdict in this conflict will go to that form of human association and government which best serves the needs and promotes the welfare of the people. We firmly believe that democracy is this form, but we shall convince others only by demonstration, not by words.

It is certainly to be hoped that we of America will continue to give democracy, and not its opponents, our full moral and economic support wherever efforts toward freedom appear, but we can do most to strengthen and extend the democratic ideal in the world by increasing the vigor and effectiveness of our achievement at home. Only to the extent that we make our own democracy function to improve the physical and mental well-being of our citizens can we hope to see freedom grow, not vanish, from the earth.

"To preserve our democracy we must improve it." Surely this fact determines one of today's urgent objectives for higher education. In the past our colleges have perhaps taken it for granted that education for democratic living could be left to courses in history and political science. It should become instead a primary aim of all classroom teaching and, more important still, of every phase of campus life.

Development of the Individual

The first goal in education for democracy is the full, rounded, and continuing development of the person. The discovery, training, and utilization of individual talents is of fundamental importance in a free society. To liberate and perfect the intrinsic powers of every citizen is the central purpose of democracy, and its furtherance of individual self-realization is its greatest glory.

A free society is necessarily composed of free citizens, and men are not made free solely by the absence of external restraints. Freedom is a function of the mind and the spirit. It flows from strength of character, firmness of conviction, integrity of purpose. It is channeled by knowledge, understanding, and the exercise of discriminating

judgment. It consists of freedom of thought and conscience in action. Free men are men who not only insist on rights and liberties but who of their own free will assume the corresponding responsibilities and obligations.

If our colleges and universities are to graduate individuals who have learned how to be free, they will have to concern themselves with the development of self-discipline and self-reliance, of ethical principles as a guide for conduct, of sensitivity to injustice and inequality, of insight into human motives and aspirations, of discriminating appreciation of a wide range of human values, of the spirit of democratic compromise and cooperation.

Responsibility for the development of these personal qualities cannot be left as heretofore to some courses or a few departments or scattered extracurricular organizations; it must become a part of every phase of college life.

Social Responsibility

Higher education has always attempted to teach young people both spiritual and material values. The classroom has imparted the principle of collective responsibility for liberty—the rule that no one person's right to freedom can be maintained unless all men work together to make secure the freedom of all.

But these efforts have not always been effective. All too often the benefits of education have been sought and used for personal and private profit, to the neglect of public and social service. Yet individual freedom entails communal responsibility. The democratic way of life can endure only as private careers and social obligations are made to mesh, as personal ambition is reconciled with public responsibility.

Today, all are agreed, we need as never before to enlist all the abilities and energies we can command in the conduct of our common affairs. Today less than ever can we afford the social loss that occurs when educated men and women neglect their obligations as citizens and deliberately refrain from taking part in public affairs.

To preserve everybody's right to life, liberty, and the pursuit of happiness, then, we need first to become aware of the fact that there is no longer room for isolationism in any successful life, personal or national. No man can live to himself alone, expecting to benefit from social progress without contributing to it.

Nor can any *group* in our society, organized or unorganized, pursue purely private ends and seek to promote its own welfare without regard to the social consequences of its activities. Business, industry, labor, agriculture, medicine, law, engineering, education . . . all these modes of association call for the voluntary development of codes of conduct, or the revision of such codes as already exist, to harmonize the special interests of the group with the general welfare.

Toward these ends, higher education must inspire its graduates with high social aims as well as endow them with specialized information and technical skill. Teaching and learning must be invested with public purpose.

Meaning of Democracy

Basic to the practice of democracy is a clear understanding of its meaning. This resides in the human values and ethical ideas on which democratic living is based.

Democracy is much more than a set of political processes. It formulates and implements a philosophy of human relations. It is a way of life—a way of thinking, feeling, and acting in regard to the associations of men and of groups, one with another. The assumption, judgments, values, and necessities of this way of life have been set down by many great minds of the Western tradition and they are embodied in the documents that make up the American bible of democracy: such documents as the Declaration of Independence, the Constitution and its Bill of Rights, the papers of Thomas Jefferson, the addresses of Abraham Lincoln, the Atlantic Charter.

The fundamental concept of democracy is a belief in the inherent worth of the individual, in the dignity and value of human life. Based on the assumption that every human being is endowed with certain inalienable rights, among which are life, liberty, and the pursuit of happiness, democracy requires of its adherents a jealous regard, not only for their own rights, but equally for the similar rights of others.

From this basic tenet have derived the specific ingredients in the American idea of democracy; the right of all men to equality of opportunity, the equal right of all citizens to vote and to hold office, the rights of religious liberty, freedom of speech and all forms of expression, freedom of association, freedom from want and from fear and ignorance; the obligation of the majority in power to respect and protect the rights of the minority.

The Government of our country embodies the effort to express these principles and to effect them in practice. Its institutions and agencies are based on the ground plan of the Constitution, amended by experience and modified in form and function through trial and error. Modifications are made whenever the people come to feel that changes are necessary in order to realize more effectively the ends of human betterment and individual development which democratic government is intended to serve.

The processes and institutions of democracy are not static or fixed; it is essential that they be flexible, capable of adaptation to the changing needs and conditions of men. The everlasting moral essence of

democracy lies in its fundamental principles, not in its means and methods of the moment.

To educate our citizens only in the structure and processes of the American Government, therefore, is to fall far short of what is needed for the fuller realization of the democratic ideal. It is the responsibility of higher education to devise programs and methods which will make clear the ethical values and the concept of human relations upon which our political system rests. Otherwise we are likely to cling to the letter of democracy and lose its spirit, to hold fast to its procedures when they no longer serve its ends, to propose and follow undemocratic courses of action in the very name of democracy.

Processes of Democracy

Young people will be better fitted to perform the duties of citizenship with wisdom and vision if to an understanding of democratic principles they join a realistic knowledge of the actual processes by which the political, economic, and social life of the people is carried on.

It will help little toward the fuller realization of democracy to have our colleges and universities turn out a generation of impractical visionaries. Youth certainly should possess inspiring vision, but it should also be familiar with the procedures and institutions through which long-range social goals are achieved in our democracy. Citizens need to understand thoroughly the functioning of political parties, the role of lobbies and pressure groups, the processes of ward and precinct caucuses. They need to know not only the potential greatness of democracy, not only the splendor of its aspirations, but also its present imperfections in practice.

These imperfections are no cause for cynicism. In the relatively short span of our history we have made tremendous strides toward equity, justice, and freedom for all. We have deepened and widened our social conscience. We have come to demand and support programs of social action designed to free common men from poverty and insecurity and make them participants in the benefits of social and cultural progress.

We do not undervalue these accomplishments when we admit that they stop far short of our purpose. The discrepancies between America's democratic creed and how Americans live are still many and serious.

Democracy's Unfinished Business

Democracy rests upon a belief in the worth and dignity of human life, yet democratic nations within a generation have had forced upon them two world wars taking millions of human lives. Democracy is

dedicated to the proposition that all men are entitled to an equal chance to be free and to seek happiness, yet our society is plagued with inequalities, even in so fundamental a right as education. Democracy insists on freedom of conscience and expression, yet Americans often seek to deny this freedom to those who do not agree with the majority opinion of the moment. Democracy is designed to promote human well-being, yet many thousands of our citizens continue to live in poverty, disease, hunger, and ignorance. Democracy sets up reason as the final arbiter in human relations, yet the appeal to emotion and prejudice is more common and often more effective among us than the appeal to reason.

Only by seeing today's democracy in the light of our vision of democracy as it can be will we come to appreciate the size of the job that remains to be done. It is a task to challenge the energies of young people and one that is worthy of their passionate devotion. It must be so presented to them.

To recognize and admit defects is not to disparage democracy. It is merely to see clearly the extent of its unfinished business.

Allegiance to Democracy

Many thoughtful observers are convinced that one of America's urgent needs today is a continued commitment to the principles of democracy. These Americans are troubled by a seeming lack of purpose in our national life. They feel we have lost our sureness of the way toward a better tomorrow.

If we have lost our sense of direction, it is a serious matter in this period of rapid and revolutionary change. Societies, like men, need a sound core of clear purpose to keep them stable in the midst of swirling uncertainties. Only with a sure view of the goal toward which they are moving can they adapt wisely and well to changing conditions along the way, and upon a society's capacity for such adaptation rests its chance of survival.

The democratic ideal will provide this core of purpose for our people if we keep it a warm and living thing. When it is a vital vision of future good, it engages the passionate loyalties of youth. But young people will not dedicate themselves to a version of democracy whose vitality and whose results for the common man they believe to be in doubt.

It becomes, then, an urgent task for our scholars and our teachers to restate and revivify the ideals of democracy. Clearing away whatever has become outworn or been debased by tawdry uses, they must rephrase in dynamic form for our day the vision of free men in a free society, so that it may remain a living faith and an inspiring dream for the American people.

But putting the democratic faith into words, no matter how new

or how vital they are, is not enough. When the democratic spirit is deep and strong in a society, its expression is not limited to the sphere of government; it animates every phase of living: economic and social and personal as well as political, relations between man and man and among groups as well as within and among nations.

This integration of democratic principles into the active life of a person and a people is not to be achieved merely by studying or discussing democracy. Classroom teaching of the American tradition, however excellent, will not weave its spirit into the innermost fiber of the students. Experience in the give and take of free men in a free society is equally necessary. Democracy must be lived to be thoroughly understood. It must become an established attitude and activity, not just a body of remote and abstract doctrine—a way for men to live and work harmoniously together, not just words in a textbook or a series of slogans.

To achieve such practice in democratic action the President's Commission recommends a careful review of administrative policies in institutions of higher education. Revision may be necessary to give students every possible experience in democratic processes within the college community. Young people cannot be expected to develop a firm allegiance to the democratic faith they are taught in the classroom if their campus life is carried on in an authoritarian atmosphere.

Admittedly there is danger in seeking to inculcate in youth a passionate loyalty to one way of life. Rededication to democracy will necessarily involve the emotions as well as the intellect. Yet the allegiance we want dare not be unreasoning and intolerant, fanatic and self-righteous. If it is, it will only aggravate excessive nationalism that is at the root of current failures in international cooperation. The task of college faculties is to inspire in our young people a consuming enthusiasm for the democratic way of life and at the same time develop in them an active appreciation of different cultures and other peoples.

To state the seeming dilemma is to point the way out of it. The heart of democracy is a constant regard for the rights and freedoms of others, and this regard cannot stop short at national boundary lines. In the measure that our renewed commitment is to the fundamentals of democracy, it will set up no barrier to international understanding; it can only further cooperation among nations.

TOWARD INTERNATIONAL UNDERSTANDING AND COOPERATION

That citizens be equipped to deal intelligently with the problems that arise in our national life is important; that they bring informed

minds and a liberal spirit to the resolution of issues growing out of international relations is imperative.

Defense of Peace

Education for peace is the condition of our survival, and it must have a high priority in all our programs of education. In the words of the constitution of the United Nations Educational, Scientific, and Cultural Organization, wars begin in the minds of men and it is in the minds of men that the defenses of peace must be constructed. However much the political and economic arrangements of governments may contribute to world union, the peace must be founded upon the intellectual and moral union of mankind.

In a world in which technology is acting as a solvent of cultures, the historic conception of international relations—political, economic, and cultural—will have to be modified if contemporary civilization is to survive. No longer can peoples hope to build their security and the peace of the world on national strength and balance of power arrangements.

The competitive principle, so long dominant in international relations, must give place, if nations are to survive, to the principle of cooperation. Men will have to invent and perfect institutional forms—such as the United Nations, UNESCO, the International Monetary Fund, and yet others—through which this cooperation can effectively take place. But these institutional arrangements will have to be built upon and buttressed by an understanding among people—an understanding that embraces cultural heritage, value premises, political ideology, legitimate national interests, folkways, and patterns of sentiment and feeling.

If the peoples of the world are to work together to build a unified, prosperous, and peaceful world, there must be freedom of communication. And this freedom must include both the *agencies* and the *subject matter* of communication. Freedom of the press, of the radio, and of reporting must be maintained in all parts of the world if we are really to understand one another. Full and free discussion of all aspects of national and international life—including the basic facts involved in diplomatic relations—is essential in a world society of free men.

American institutions of higher education have an enlarged responsibility for the diffusion of ideas in the world that is emerging. They will have to help our own citizens as well as other peoples to move from the provincial and insular mind to the international mind.

This will involve providing expanded opportunity in colleges and universities for the study of all aspects of international affairs: the nature and development of other civilizations and cultures; national-

ism in its relation to internationalism; the tensions leading to war as well as war itself; the ways in which war has been used as an instrument of national policy and the attitudes which nations have had in each war with respect to the justice of that war as they saw it—in other words, an analytical study of war and its causes as these have developed in the past.

Development of the international mind will also involve study of the effect of technology on the present world situation and analysis of the structure and operation of the various new world organizations designed to further international security and the peaceful solution of common problems.

Peace today is indivisible. Never again can war anywhere in the world be dismissed as a "local conflict" or a matter of "domestic jurisdiction." A threat to peace anywhere menaces the security of people everywhere. But we shall not achieve a stable and lasting peace if we think of it negatively as the mere absence of armed conflict. The creation and preservation of an affirmative peace demands the establishment of just and humane relationships among the peoples of the world, the development of a state of solidarity and mutual confidence in which men and women may live secure and satisfying lives.

Preparation for World Citizenship

In speed of transportation and communication and in economic interdependence the nations of the globe already are one world; the task is to secure recognition and acceptance of this oneness in the thinking of the people, so that the concept of one world may be realized psychologically, socially, and in good time politically. It is this task in particular that challenges our scholars and our teachers to lead the way toward a new way of thinking.

Traditionally the United States, having the conquest of a continental wilderness to occupy its energies and two mighty oceans to protect it, has sought to remain aloof from "foreign entanglements." But now foreign affairs are no longer foreign. The airplane and the radio have wiped out the ocean barriers; they have brought us next door to our neighbors overseas. And World War II and its aftermath have committed us to a responsible role in world affairs beyond any possibility of turning back to the illusive safety of detachment.

But the American people are not adequately prepared for world citizenship. The new role has come upon us so suddenly that we approach it with hesitation instead of with an exciting vision of its possibilities. Our thinking still bears marks of provincialism. We tend to see other countries and peoples in our own image and to view them with suspicion or dismiss them as inferior and backward when we find them different from ourselves.

For effective international understanding and cooperation we need to acquire knowledge of, and respect for, other peoples and their cultures—their traditions, their customs, and attitudes, their social institutions, their needs and aspirations for the future. We must learn to admit the possible worth of human values and ways of living we ourselves do not accept.

In the past the liberal arts college has stressed the history, arts, and institutions of Western culture, without giving much time or attention to the kinds of civilization that exist in other parts of the globe. In the new world it is not enough to know and understand our own heritage. Modern man needs to sense the sweep of world history in order to see his own civilization in the context of other cultures.

We need to perceive the rich advantages of cultural diversity. To a provincial mind cultural differences are irritating and frightening in their strangeness, but to a cosmopolitan and sensitive mind they are stimulating and rewarding. They are colorful elaborations on the common humanity of men everywhere. We must develop a deep sensitivity to the emotions, the hopes, and the needs of human beings everywhere and so come to accept, not merely in abstract terms but in concrete forms, the brotherhood and interdependence as well as the individuality of all men.

To fit ourselves for the world leadership that has fallen to America in this crucial moment of history, we shall have to acquire quickly a sympathetic understanding of the values and aspirations that move men in the vast areas of eastern Europe, Asia, Africa, South America, and the islands of the sea. We can gain this understanding both through a study of their historical development and through knowledge of their contemporary culture. Information about their current activities in science, industry, literature, and the arts will be an invaluable aid and can be secured in part through the exchange of persons and goods.

It is especially important that we acquaint ourselves with the oriental world. Asiatics constitute the largest single segment of the human race. Yet American undergraduates and graduates know little or nothing about the history, the present problems, or the future needs of these millions with whom our relations are certain to increase. We must study the Orient—not as a remote and static display of artifacts in a museum, but as a living and dynamic factor in our own society. The East is shaking off its traditional passive attitude toward the West and more than ever we shall feel the impact of its cultures.

American students should be encouraged to discover why the Oriental properly considers himself as much a person of refinement,

of ethical standards, and of religious values as any citizen of Western society. East and West are coming together in one world order. We could not stem this development if we wanted to; we can only prepare to deal with it intelligently.

It is equally important that we learn the ways of thinking and living of the Russian people. The vast Russian state, part European, part Asiatic, is one of the world's greatest powers and her policies and deeds are of supreme importance. Yet the average American college graduate knows almost nothing about Russia. The study of the U. S. S. R., in a sincere attempt to understand it, must be given an important place in American education.

Instruments of International Cooperation

Every effort should be made to secure free and uncensored communication among the peoples of the world, so that they may come to understand one another, recognize their interdependence, and accept the rule of life that personal and national rights are extended and made more secure through international agreement and the progress of world-wide well-being.

International understanding and cooperation cannot be expected to elimiate disagreement and conflict among nations. But no well-ordered or civilized society permits a conflict of interests among its individual citizens to be settled by violent assault. National societies have outlawed killing by accepting a code of laws and a system of courts to which the strong as well as the weak are subject. International society must follow the same course to the same goal.

The nations of the world now have a new agency for effecting international amity and cooperation. It remains for the peoples of the world to make a United Nations work—by insisting that their governments shall use it and shall strengthen it step by step, supporting it by international law and international courts to which all nations, the strong as well as the weak, shall be subject.

Toward achievement of this ultimate goal UNESCO promises much, because its work lies largely in those areas in which international communication has been characteristic from the beginning. National boundaries have never been maintained effectively in the world of letters, art, music, and science. The citizens of that world are all people of all nations to whom words and images and music and mathematical formulas have meaning. Through widening the citizenship in that world, UNESCO can make a great contribution to effective communication between peoples who are still separated by the boundaries of national states.

Helpful too will be actual experience wherever possible, within our own Nation and among nations, in working with people of different races and cultures on measures for human betterment and world

brotherhood. The exchange of persons between nations—experts and scholars in all fields, teachers and students, writers and artists, businessmen and farmers, clubwomen and labor leaders—will further understanding also, if these individuals go and come, not as casual sightseers, but as coworkers seeking to learn.

The radio, the motion picture, newspapers, magazines, books—all the mediums of mass communication that proved so effective in creating unity and morale during the recent war—can be equally effective in creating unity and the will for peace.

But the major part of the task will still devolve upon the schools and colleges. Education has taught the concept of common humanity and brotherhood; the schools and colleges have tried to create world-wide understanding; teachers have presented the ideal of peace and cooperation among men and nations. But in the past these things have been done too indirectly; now we must do them directly, explicitly, and urgently.

Unfortunately we are handicapped by the lack of appropriate tools and materials. Studies have revealed how inadequate and prejudiced many of our elementary and secondary school textbooks are in their treatment of other nations and peoples. At the college level many of our disciplines and courses bear incidentally on the problem, but rarely do we educate systematically and deliberately for world-wide understanding.

The geographic area study programs that are being set up in a number of universities are a commendable development in this direction, but as yet higher education in America does not even approximate adequate presentation of any of the major Eastern and Middle Eastern civilizations. For no one of these cultures is our supply of trained scholars adequate, and for many of them we have virtually no competent teachers at all. Any considerable improvement or extension of foreign-area studies in the colleges is dependent upon the creation of an adequate teaching personnel.

In addition, this personnel must be provided with the necessary tools. For example, it is estimated that any college contemplating serious study of Russian culture must have in its library a basic collection of at least 500 specified books, and there will be no adequate development of Russian studies in this country until 200 or 300 American colleges possess these books or their equivalent. But these books cannot be bought; they do not exist; it will take a major publishing enterprise to make them available. And the same obstacle to serious scholarship exists in many other areas of non-European culture.

Nor are these difficulties of scholarship the whole of the problem. Specialized area studies are too limited in scope and touch too small a part of the student body to accomplish the necessary diffusion of

intercultural understanding. For this purpose, courses of broader scope and more general interpretation and synthesis are required. And for these again, the teachers are yet to be trained and the textbooks are yet to be written.

There is urgent need for a program of education for world citizenship that can be made a part of every person's general education. No one scholar, no one group of scholars, possesses the comprehensive knowledge needed to devise this kind of educational program. Men trained in many different areas must pool their knowledge—not arranging their fragmentary contributions in a loose sequence, but organizing them into an integrated pattern.

The task is not easy; it demands imaginative thinking, exceptional ingenuity, and concerted effort. But it must be done; we dare not again risk being too late with too little.

TOWARD THE SOLUTION OF SOCIAL PROBLEMS

It is essential that we apply our trained intelligence and creative imagination, our scientific methods of investigation, our skill in invention and adaptation, as fully to the problems of human association as to the extension of knowledge about the physical world. This is what is meant by the development of *social invention* and *social technology.*

Human Relations

We have worked wonders by the application of technology to the problems of our physical environment, but we have scarcely touched the fringes of its possibilities in the realm of human relations. In fact, we hardly recognize the existence of inventiveness in the social sphere. Yet the United Nations and UNESCO are inventions no less than the atom bomb, and they are just as capable of technical improvement.

As a people, Americans have come to appreciate the need for experimental research and technical training in the physical and natural sciences, but we tend still to think that good will, tolerance, and the cooperative spirit are all we need to make society function. These attitudes are vitally necessary; we shall make little progress without them; and, as has already been emphasized, education should concern itself with developing them. But alone they are not enough. Social techniques and social mechanisms must be found to express and implement them.

One often hears or reads, for example, puzzled questioning as to why man's intense desire for security and his fear of another war have produced so little actual progress toward peace in the world. But man's fear of smallpox did not eliminate that scourge until medical science and technology had invented and improved the technique of

vaccination. Nor did man's desire to fly enable him to accomplish the feat until scientific ingenuity and engineering skill had produced the necessary mechanism and had trained men to use it.

In comparable fashion it will take social science and social engineering to solve the problems of human relations. Our people must learn to respect the need for special knowledge and technical training in this field as they have come to defer to the expert in physics, chemistry, medicine, and other sciences. Relieving the tensions that produce war, for example, will require methods as specific and as technical as are those of aeronautics or electronics.

The development of social technology is an imperative today because of the remarkable advances we have made in natural science. Scientific discoveries and their technological application have altered our physical environment profoundly in the space of only a few generations, but our social institutions have not kept pace with the changes—although by applying the methods of science we have achieved marked success in some forms of social organization.

Understanding of Self

Man's capacity to subdue nature to his will has raced far ahead of his ability to understand himself or to reconstruct his institutions. This is true in spite of the fact that higher education itself traditionally has followed the Socratic prescription of putting the study of man first. We have grown strong in the mastery of our physical world, but by no means equally strong in the ability to manage and direct the social forces that shape our lives.

The gap between our scientific know-how and our personal and social wisdom has been growing steadily through the years, until now with the release of atomic energy it has become too wide to be safe.

It is imperative that we find not only the will but the ways and means to reorder our lives and our institutions so as to make science and technology contribute to man's well-being rather than to his destruction. We need to experiment boldly in the whole area of human relations, seeking to modify existing institutions and to discover new workable patterns of association. We must bring our social skills quickly abreast of our skills in natural science.

The irony is that the very developments which have precipitated this critical situation seem likely to aggravate it. The spectacular achievements of natural science, especially during World War II, are certain to bring increased pressure for scientific advance. Already it is suggested that "scientific preeminence will be the keystone of national security." But will it? Can we depend solely, or even primarily, on natural science for our national safety?

In the recent war the margin of our scientific and technical superiority over our enemies was dangerously narrow at times, and the

scientists themselves are warning us at every opportunity that they can provide no defense against the new weapons. It is they who are proclaiming most vigorously that this defense can be found only in the realm of social and political organization on a world-wide scale. To quote Albert Einstein for one: "Being an ingenious people, Americans find it hard to believe there is no foreseeable defense against atomic bombs. But this is a basic fact. Scientists do not even know of any field which promises us any hope of adequate defense. . . . Our defense is in international law and order."

Leadership Needed

Upon leadership in social invention, then, as much as upon superiority in natural science and engineering, rests our hope of national survival. Unfortunately, the uneasy state of the world leads us to discuss these matters in terms of national defense. The ultimate justification for progress in science, social and natural, is the contribution it can make to the welfare of people everywhere. Continued advance in natural science will give strength to democracy in the eyes of other peoples because of the improvement it makes possible in our standard of living, and the development of a more effective social science will contribute to a fuller realization of the democratic principles of justice and freedom for all.

The colleges and universities, the philanthropic foundations, and the Federal Government should not be tempted by the prestige of natural science and its immediately tangible results into giving it a disproportionate emphasis in research budgets or in teaching programs. It is the peculiar responsibility of the colleges to train personnel and inaugurate extensive programs of research in social science and technology. To the extent that they have neglected this function in the past they should concentrate upon it in the decades just ahead.

We cannot pin our faith on social drift, hoping that if each individual pursues his own ends with intelligence and good will, things will somehow right themselves. We cannot rely on the processes of automatic adjustment. We must develop a positive social policy, both within and among nations. We must plan, with intelligence and imagination, the course we are to take toward the kind of tomorrow we want.

IT CAN BE DONE

In emphasizing education for democracy, for international understanding, and for more effective social science as objectives for higher education in America today, the President's Commission has no desire to suggest limitations on progress and experimentation in other directions. Diversity in purpose is a potential source of strength in demo-

cratic institutions. From the innovative and experimental approach of today may well come the general objective of tomorrow.

These three goals are stated as the minimum essentials of the program to be developed in all institutions of higher education. And they pose a truly staggering job for the colleges and universities. But it can be done. The necessary intelligence and ability exist. What we need is awareness of the urgency of the task, the will and the courage to tackle it, and a wholehearted commitment to its successful performance.

But to delay is to fail. Colleges must accelerate the normally slow rate of social change which the educational system reflects; we need to find ways quickly or making the understanding and vision of our most farsighted and sensitive citizens the common possession of all our people.

To this end the educational task is partly a matter of the numbers to be educated and partly one of the kind of education that is to be provided. We shall have to educate more of our people at each level of the educational program, and we shall have to devise patterns of education that will prepare them more effectively than in the past for responsible roles in modern society.

These two aspects of the task ahead are the subjects of the succeeding chapters of this volume.

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Education for All

Education is by far the biggest and the most hopeful of the Nation's enterprises. Long ago our people recognized that education for all is not only democracy's obligation but its necessity. Education is the foundation of democratic liberties. Without an educated citizenry alert to preserve and extend freedom, it would not long endure.

Accepting this truth, the United States has devoted many of its best minds and billions of its wealth to the development and maintenance of an extensive system of free public schools, and through the years the level of schooling attained by more and more of our people has steadily risen.

RECORD OF GROWTH

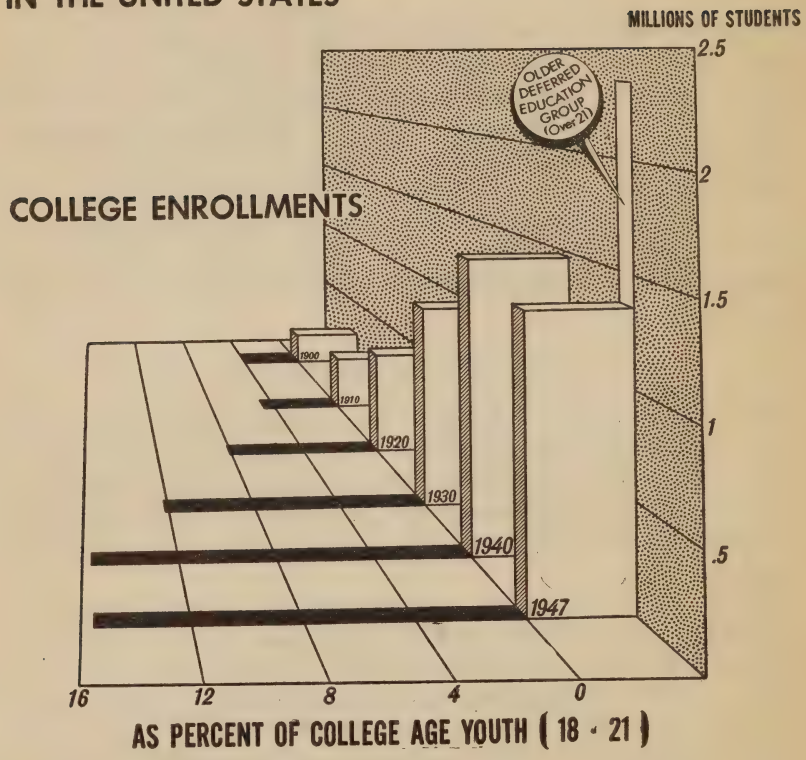
The expansion of the American educational enterprise since the turn of the century has been phenomenal. The 700,000 enrollment in high schools in the school year 1900 was equal to only 11 percent of the youth of usual high-school age, 14 through 17 years old. This increased in 1940 to over 7,000,000 students representing 73 percent of the youth.

Almost as spectacular has been the increase in college attendance. In 1900 fewer than 250,000 students, only 4 percent of the population 18 through 21 years of age, were enrolled in institutions of higher education. By 1940 the enrollment had risen to 1,500,000 students, equal to a little less than 16 percent of the 18–21 year olds. In 1947, enrollments jumped to the theretofore unprecedented peak of 2,354,000 although approximately 1,000,000 of the students were veterans, older than the usual college age because World War II had deferred their education. The situation in the fall of 1947 gives every indication that the school year 1948 will witness even larger enrollments. (See Chart 1, "Growth of College Population.")

This record of growth is encouraging, but we are forced to admit nonetheless that the educational attainments of the American people are still substantially below what is necessary either for effective individual living or for the welfare of our society.

Chart 1

GROWTH OF COLLEGE POPULATION IN THE UNITED STATES



Resident enrollments from U. S. Office of Education. Population data from U. S. Bureau of the Census; that for 1947 adjusted to exclude numbers in the armed forces.

According to the U. S. Bureau of the Census, almost 17,000,000 men and women over 19 years of age in 1947 had stopped their schooling at the sixth grade or less. Of these, 9,000,000 had never attended school or had stopped their schooling before completing the fifth grade. In 1947, about 1,600,000 or 19 percent of our high-school-age boys and girls were not attending any kind of school, and over two-thirds of the 18- and 19-year-old youths were not in school.

These are disturbing facts. They represent a sobering failure to reach the educational goals implicit in the democratic creed, and they are indefensible in a society so richly endowed with material resources as our own. We cannot allow so many of our people to remain so ill equipped either as human beings or as citizens of a democracy.

Great as the total American expenditure for education may seem, we have not been devoting any really appreciable part of our vast wealth to higher education. As table 1 shows, even though in the last 15 years our annual budget for education has risen in number of dollars, it has actually declined in relation to our increasing economic productivity.

The $1,000,000,000 we have put into our colleges and universities in 1947 was less than one-half of 1 percent of the gross national product, which is the market value of all the goods and services produced in the country in that year.

TABLE 1.—*Direct Cost of Higher Education and Its Relation to the Gross National Product*

Fiscal year	Amount (in millions)[1]	Proportion of gross national product (percent)[2]
1932	$421	0. 63
1940	522	. 55
1947	1. 005	. 46

[1] Source: General and educational expenditures, not including capital expansion, as reported by U. S. Office of Education.
[2] Source of gross national product: U. S. Bureau of Foreign and Domestic Commerce.

BARRIERS TO EQUAL OPPORTUNITY

One of the gravest charges to which American society is subject is that of failing to provide a reasonable equality of educational opportunity for its youth. For the great majority of our boys and girls, the kind and amount of education they may hope to attain depends, not on their own abilities, but on the family or community into which they happened to be born or, worse still, on the color of their skin or the religion of their parents.

Economic Barriers

The old, comfortable idea that "any boy can get a college education who has it in him" simply is not true. Low family income, together with the rising costs of education, constitutes an almost impassable barrier to college education for many young people. For some, in fact, the barrier is raised so early in life that it prevents them from attending high school even when free public high schools exist near their homes.

Despite the upward trend in average per capita income for the past century and more, the earnings of a large part of our population are still too low to provide anything but the barest necessities of physical life. It is a distressing fact that in 1945, when the total national income was far greater than in any previous period in our history, half of the children under 18 were growing up in families which had a cash income of $2,530 or less. The educational significance of these facts is heightened by the relationship that exists between income and birth rate. Fertility is highest in the families with lowest incomes.

In the elementary and secondary schools the effects of these economic conditions are overcome to a considerable extent, though not entirely, by the fact that education is free and at certain ages is compulsory. But this does not hold true at the college level. For a number of years the tendency has been for the college student to bear an increasing share of the cost of his own education. Even in State-supported institutions we have been moving away from the principle of free education to a much greater degree than is commonly supposed.

Under the pressure of rising costs and of a relative lessening of public support, the colleges and universities are having to depend more and more on tuition fees to meet their budgets. As a result, on the average, tuition rates rose about 30 percent from 1939 to 1947.

Nor are tuition costs the whole of it. There are not enough colleges and universities in the country, and they are not distributed evenly enough to bring them within reach of all young people. Relatively few students can attend college in their home communities. So to the expense of a college education for most youth must be added transportation and living costs—by no means a small item.

This economic factor explains in large part why the father's occupation has been found in many studies to rank so high as a determining factor in a young person's college expectancy. A farm laborer earns less than a banker or a doctor, for instance, and so is less able to afford the costs of higher education for his children. The children, moreover, have less inducement to seek a college education because of their family background. In some social circles a college education is often considered a luxury which can be done without, something desirable perhaps, "but not for the likes of us."

The importance of economic barriers to post-high school education lies in the fact that there is little if any relationship between the ability to benefit from a college education and the ability to pay for it. Studies discussed in the volume of this Commission's report, "Equalizing and Expanding Individual Opportunity," show that among children of equally high ability those with fathers in higher-income occupations had greater probability of attending college.

By allowing the opportunity for higher education to depend so largely on the individual's economic status, we are not only denying to millions of young people the chance in life to which they are entitled; we are also depriving the Nation of a vast amount of potential leadership and potential social competence which it sorely needs.

Regional Variations

An individual's birthplace may also determine how much and what kind of an education he is likely to get. Regional differences are largely caused by differentials in wealth and human fertility. There is a tremendous variation in per capita wealth from State to State and even among counties within a State. And the poorer areas tend to have a larger proportion of young people to adults. Consequently the unequal distribution of children in relation to income represents an unequal distribution of the Nation's bill for education.

Where a community or State with a low income has an extremely high birth rate, it becomes next to impossible for it to provide the funds for an adequate educational program. In contrast, communities with a relatively small youth population are in a far better position to meet their obligation. In 1945, for example, only 18 percent of the population of California was between 5–17 years of age. In the same year, the 5–17 year age group amounted to 31 percent of the population of South Carolina. As a measure of potential support for the schools, the total income payments in each State was divided by the number of children in that State. The results of this appraisal are shown in table 2. If California's percentage of children had been as high as South Carolina's, the State income per child of school age would have been cut from $9,029 to $5,243. If South Carolina's percentage of youth had been as low as California's, her State income per child would have been raised from $2,363 to $4,070.

By devoting 1.5 percent of the 1945 income in the State to public elementary and secondary education, California managed an average expenditure per child of $131, whereas 1.8 percent of the total income in Mississippi averaged $36 per child. If Mississippi had equaled California's educational expenditures per child, it would have consumed 6.5 cents out of every dollar of income received by every person

in Mississippi. The resulting inequality of educational opportunity for the children of the two States is glaringly obvious.

TABLE 2.—*Income Per Child of School Age by State: 1945* [1]

State	Income payments to individual per child 5–17 in 1945	State	Income payments to individual per child 5–17 in 1945
California	$9,029	Iowa	$4,826
New York	8,674	New Hampshire	4,806
Washington	8,202	Minnesota	4,779
Connecticut	7,819	Maine	4,538
Montana	7,545	Vermont	4,503
Nevada	7,466	South Dakota	4,500
New Jersey	7,323	Idaho	4,362
Illinois	7,142	Texas	4,119
Oregon	7,109	Utah	4,058
Massachusetts	6,915	Arizona	3,864
Delaware	6,854	North Dakota	3,855
Rhode Island	6,770	Virginia	3,693
Ohio	6,432	Oklahoma	3,429
Maryland	5,784	Tennessee	3,282
Indiana	5,640	Louisiana	3,238
Michigan	5,638	West Virginia	2,906
Pennsylvania	5,582	Georgia	2,903
Florida	5,320	New Mexico	2,838
Kansas	5,227	Kentucky	2,780
Wisconsin	5,200	North Carolina	2,671
Colorado	5,109	Alabama	2,534
Missouri	5,082	Arkansas	2,498
Nebraska	5,066	South Carolina	2,363
Wyoming	5,006	Mississippi	2,018
District of Columbia	4,939		

[1] Source of income data is income payments to individuals as reported by the U. S. Bureau of Foreign and Domestic Commerce; data on children 5–17 years of age from the U. S. Bureau of the Census.

For a long period, the South has had a higher proportion of its population in the younger ages.

TABLE 3.—*Distribution of Civilian Population, Births, and School Age Children by Geographic Regions: 1945*

Region	Civilian population [1]	Births [2]	Children aged 5 through 17 [1]
	Percent	*Percent*	*Percent*
United States	100.0	100.0	100.0
Northeast	26.5	23.5	23.7
Northcentral	30.2	27.9	28.3
South	31.1	35.8	37.1
West	12.2	12.8	10.9

[1] Source: U. S. Bureau of the Census. [2] Source: National Office of Vital Statistics.

In 1945, the South had 27.0 percent of its population in the ages 5 through 17, as contrasted with a national average of 22.7 percent and with 20.2 percent in the Northeast. In that year, the South had a birth

rate of 24.7 per 1,000 civilians while the Nation averaged 21.5 and the Northeast had only 19.0 births per thousand civilians. Clearly the South is supplying new population to the Nation out of all proportion to its numbers.

Sharp and significant differences exist between the educational situations in urban and rural areas. For example, with respect to the educational attainment of youths aged 20 to 24, the median of school years completed in 1940 was 12.0 in urban areas, 10.7 in rural nonfarm areas and 8.8 in rural farm areas. The same disparity is revealed in the analysis of schooling completed by the adult population, shown in table 4.

TABLE 4.—*Proportion of Population 25 Years Old and Older Completing Selected Levels of Schooling: 1940* [1]

Schooling Completed	Urban areas	Rural nonfarm areas	Rural farm areas
	Percent	*Percent*	*Percent*
4 years or more of college	5. 7	4. 2	1. 3
Less than 5 years of grade school	11. 2	13. 6	20. 4

[1] Source: U. S. Bureau of the Census.

Thus, it is apparent that, just before World War II, a man or woman living on a farm had only about one-fourth the chance of having completed college as someone in the city, and almost twice as much chance of not having completed more than 4 years of grade school. In 1947, of the urban youth 20 to 24 years of age, 12.5 percent were attending school, whereas of the rural nonfarm youth 8.8 percent were in school, and of the farm youth only 6.5 percent were in school. Thus, it appears as though much of this differential is persisting.

It is all too clear that whether one considers regional variations or urban-rural differentials, the fact is that the future citizens of the Nation are being born in disproportionately large numbers in communities in which economic resources are the weakest, the plane of living the lowest, cultural conditions the poorest, and the home the least well equipped to contribute either to the physical well-being of youth or to their intellectual development.

These conditions mean that millions of youth are being denied their just right to an adequate education. The accident of being born in one place rather than another ought not to affect so profoundly a young person's chance of getting an education commensurate with his native capacities.

But the situation has even deeper meaning in its implications for society. Educational leaders must squarely face the fact that the unequal distribution of children in relation to regional and urban-rural differences in wealth is tending to cancel out the potential bene-

fits of our educational enterprise. The greater number of children being born in the families and the regions of the country that are least able to provide them with a good education at home or in school is contributing to the spread of a meager cultural heritage, and this may one day tip the balance in our struggle for a better civilization.

No one would suggest that the proper remedy for this situation is a lower birth rate in any part of the country. America's children are America's most vital resource.

The only possible solution of the problem is, as rapidly as possible, to raise economic and cultural levels in our less advanced areas, and in the meantime to provide outside assistance that will enable these areas to give their children equal educational opportunities with all others in the Nation.

Barrier of a Restricted Curriculum

We shall be denying educational opportunity to many young people as long as we maintain the present orientation of higher education toward verbal skills and intellectual interests. Many young people have abilities of a different kind, and they cannot receive "education commensurate with their native capacities" in colleges and universities that recognize only one kind of educable intelligence.

Traditionally the colleges have sifted out as their special clientele persons possessing verbal aptitudes and a capacity for grasping abstractions. But many other aptitudes—such as social sensitivity and versatility, artistic ability, motor skill and dexterity, and mechanical aptitude and ingenuity—also should be cultivated in a society depending, as ours does, on the minute division of labor and at the same time upon the orchestration of an enormous variety of talents.

If the colleges are to educate the great body of American youth, they must provide programs for the development of other abilities than those involved in academic aptitude, and they cannot continue to concentrate on students with one type of intelligence to the neglect of youth with other talents.

Racial and Religious Barriers

The outstanding example of these barriers to equal opportunity, of course, is the disadvantages suffered by our Negro citizens. The low educational attainments of Negro adults reflect the cumulative effects of a long period of unequal opportunity. In 1940 the schooling of the Negro was significantly below that of whites at every level from the first grade through college. At the college level, the difference is marked; 11 percent of the white population 20 years of age and over had completed at least 1 year of college and almost 5 percent had finished 4 years; whereas for the nonwhites (over 95 percent of whom are Negroes) only a little more than 3 percent had completed at least 1 year of college and less than 1½ percent had completed a full course.

Gains Have Been Made. Noteworthy advances have been made toward eliminating the racial inequalities which in large measure are responsible for this low level of educational achievement by the Negroes. Between 1900 and 1940 the percentage of Negroes 5 to 20 years of age attending school rose from 31.0 percent to 64.4 percent. And the percentage of Negro youth 15 to 20 years old attending school increased from 17.5 in 1900 to 33.8 in 1940. That differentials still persist, however, is shown in table 5.

TABLE 5.—*Proportion of Young Persons Attending School, by Age and Color: April 1947* [1]

Age	Attending school	
	White	Nonwhites (about 95 percent Negro)
	Percent	*Percent*
6 years of age	67. 8	63. 4
7 to 9 years of age	97. 1	89. 2
10 to 13 years of age	98. 2	93. 7
14 to 17 years of age	82. 5	71. 9
18 to 19 years of age	28. 2	24. 2
20 to 24 years of age	11. 3	6. 7

[1] Source: U. S. Bureau of the Census.

Institutions which accept both Negro and non-Negro students do not maintain separate record systems for Negroes, and so data on enrollment of Negroes are restricted to those institutions—usually located in the South—which accept only Negro students. In recent years, since 1932, these institutions have almost tripled their enrollments whereas the institutions for whites or which are unsegregated only about doubled theirs:

TABLE 6.—*Enrollment of Institutions of Higher Education and Index of Change* [1]

Year	Enrollments in institutions accepting			
	Negroes only		All other	
	Number	Index of change (1932=100)	Number	Index of change (1932=100)
1932	21, 880	100	1, 132, 237	100
1936	32, 628	149	1, 175, 599	104
1940	41, 839	191	1, 452, 364	128
1947 [2]	63, 500	290	2, 290, 500	202

[1] Source is resident enrollment as reported by U. S. Office of Education.
[2] Estimated.

Inequalities Remain. But the numbers enrolled in school do not tell the whole story. Marked as has been the progress in Negro education in recent years, it cannot obscure the very great differences which still persist in educational opportunities afforded the Negro and the non-Negro.

In 17 States and the District of Columbia, segregation of the Negroes in education is established by law.[1] In the *Gaines* decision, the U. S. Supreme Court ruled that "if a State furnishes higher education to white residents, it is bound to furnish [within the State] substantially equal advantages to Negro students". Although segregation may not legally mean discrimination as to the quality of the facilities it usually does so in fact. The schools maintained for the Negroes are commonly much inferior to those for the whites. The Negro schools are financed at a pitifully low level, they are often housed in buildings wholly inadequate for the purpose, and many of the teachers are sorely in need of more education themselves. Library facilities are generally poor or lacking altogether, and professional supervision is more a name than a reality.

These facts are supported strongly by a recent study in the District of Columbia. The District's Superintendent of Schools in his 1946–47 report to the Board of Education states that the student-teacher ratios in the schools for Negroes were significantly and consistently higher than those for non-Negroes—from the kindergartens through the teachers' colleges.

Segregation lessens the quality of education for the whites as well. To maintain two school systems side by side—duplicating even inadequately the buildings, equipment, and teaching personnel—means that neither can be of the quality that would be possible if all the available resources were devoted to one system, especially not when the States least able financially to support an adequate educational program for their youth are the very ones that are trying to carry a double load.

It must not be supposed that Negro youth living in States in which segregation is not legalized are given the same opportunities as white youth. In these areas economic and social discrimination of various sorts often operates to produce segregation in certain neighborhoods, which are frequently characterized by poorer school buildings, less equipment and less able teachers.

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[1] In the case of *Mendez* v. *Westminster School District,* the segregation of students of Mexican ancestry in the Westminster, Calif., school district, on the alleged grounds that because of their ancestry such students have language difficulties, was held illegal. The U. S. district court which heard the case held that segregation is unconstitutional under the Federal Constitution. On appeal by the Westminster school district, the U. S. circuit court of appeals limited its affirmance of the district court's decision by holding that the specific statutes involved were illegal under the California law.

Equality of educational opportunity is not achieved by the mere physical existence of schools; it involves also the quality of teaching and learning that takes place in them.

The Quota System. At the college level a different form of discrimination is commonly practiced. *Many colleges and universities, especially in their professional schools, maintain a selective quota system for admission, under which the chance to learn, and thereby to become more useful citizens, is denied to certain minorities, particularly to Negroes and Jews.*

This practice is a violation of a major American principle and is contributing to the growing tension in one of the crucial areas of our democracy.

The quota, or *numerous clausus*, is certainly un-American. It is European in origin and application, and we have lately witnessed on that continent the horrors to which, in its logical extension, it can lead. To insist that specialists in any field shall be limited by ethnic quotas is to assume that the Nation is composed of separate and self-sufficient ethnic groups and this assumption America has never made except in the case of its Negro population, where the result is one of the plainest inconsistencies with our national ideal.

The quota system denies the basic American belief that intelligence and ability are present in all ethnic groups, that men of all religious and racial origins should have equal opportunity to fit themselves for contributing to the common life.

Moreover, since the quota system is never applied to all groups in the Nation's population, but only to certain ones, we are forced to conclude that the arguments advanced to justify it are nothing more than rationalizations to cover either convenience or the disposition to discriminate. The quota system cannot be justified on any grounds compatible with democratic principles.

Consequences of Inequalities of Opportunity

These various barriers to educational opportunity involve grave consequences both for the individual and for society.

From the viewpoint of the individual they are denying to millions of young people what the democratic creed assumes to be their birthright: an equal chance with all others to make the most of their native abilities. From the viewpoint of society the barriers mean that far too few of our young people are getting enough preparation for assuming the personal, social, and civic responsibilities of adults living in a democratic society.

It is especially serious that not more of our most talented young people continue their schooling beyond high school in this day when the complexity of life and of our social problems means that we need desperately every bit of trained intelligence we can assemble. The

present state of affairs is resulting in far too great a loss of talent—our most precious natural resource in a democracy.

In a country as vast as the United States, with all its regional differences in cultural patterns and economic resources, absolute equality of educational opportunity perhaps may not be reasonably expected. But today the differences that do exist are so great as to compel immediate action.

In communities where the birth rate is low, where the burden of caring for the nurture and education of the oncoming generation is relatively light, where the level of living is high, the advantages of education are extended to youth on more nearly equal terms. But in communities where the birth rate is high, where the economic structure is weak, where the level of living is low, where community and family resources contribute least to intellectual growth, there we support education in niggardly fashion, though at great effort.

If over the years we continue to draw the population reserves of the Nation from the most underprivileged areas and families and fail to make good the deficit by adequate educational opportunities, we shall be following a course that is sure to prove disastrous to the level of our culture and to the whole fabric of our democratic institutions.

We have proclaimed our faith in education as a means of equalizing the conditions of men. But there is grave danger that our present policy will make it an instrument for creating the very inequalities it was designed to prevent. If the ladder of educational opportunity rises high at the doors of some youth and scarcely rises at all at the doors of others, while at the same time formal education is made a prerequisite to occupational and social advance, then education may become the means, not of eliminating race and class distinctions, but of deepening and solidifying them.

It is obvious, then, that free and universal access to education, in terms of the interest, ability, and need of the student, must be a major goal in American education.

TOWARD EQUALIZING OPPORTUNITY

The American people should set as their ultimate goal an educational system in which at no level—high school, college, graduate school, or professional school—will a qualified individual in any part of the country encounter an insuperable economic barrier to the attainment of the kind of education suited to his aptitudes and interests.

This means that we shall aim at making higher education equally available to all young people, as we now do education in the elementary and high schools, to the extent that their capacity warrants a further social investment in their training.

Obviously this desirable realization of our ideal of equal educational opportunity cannot be attained immediately. But if we move toward it as fast as our economic resources permit, it should not lie too far in the future. Technological advances, that are already resulting in phenomenal increases in productivity per worker, promise us a degree of economic well-being that would have seemed wholly Utopian to our fathers. With wise management of our economy, we shall almost certainly be able to support education at all levels far more adequately in the future than we could in the past.

The Commission recommends that steps be taken to reach the following objectives without delay:

1. High school education must be improved and should be provided for all normal youth.

This is a minimum essential. We cannot safely permit any of our citizens for any reason other than incapacity, to stop short of a high school education or its equivalent. To achieve the purpose of such education, however, it must be improved in facilities and in the diversity of its curriculum. Better high school education is essential, both to raise the caliber of students entering college and to provide the best training possible for those who end their formal education with the twelfth grade.

2. The time has come to make education through the fourteenth grade available in the same way that high school education is now available.

This means that tuition-free education should be available in public institutions to all youth for the traditional freshman and sophomore years or for the traditional 2-year junior college course.

To achieve this, it will be necessary to develop much more extensively than at present such opportunities as are now provided in local communities by the 2-year junior college, community institute, community college, or institute of arts and sciences. The name used does not matter, though community college seems to describe these schools best; the important thing is that the services they perform be recognized and vastly extended.

Such institutions make post-high-school education available to a much larger percentage of young people than otherwise could afford it. Indeed, as discussed in the volume of this Commission's report, "Organizing Higher Education," such community colleges probably will have to carry a large part of the responsibility for expanding opportunities in higher education.

3. The time has come to provide financial assistance to competent students in the tenth through fourteenth grades who would not be able to continue their education without such assistance.

Tuition costs are not the major economic barrier to education, especially in college. Costs of supplies, board, and room, and other living needs are great. Even many high-school students are unable to continue in school because of these costs.

Arrangements must be made, therefore, to provide additional financial assistance for worthy students who need it if they are to remain in school. Only in this way can we counteract the effect of family incomes so low that even tuition-free schooling is a financial impossibility for their children. Only in this way can we make sure that all who are to participate in democracy are adequately prepared to do so.

4. The time has come to reverse the present tendency of increasing tuition and other student fees in the senior college beyond the fourteenth year, and in both graduate and professional schools, by lowering tuition costs in publicly controlled colleges and by aiding deserving students through inaugurating a program of scholarships and fellowships.

Only in this way can we be sure that economic and social barriers will not prevent the realization of the promise that lies in our most gifted youth. Only in this way can we be certain of developing for the common good all the potential leadership our society produces, no matter in what social or economic stratum it appears.

5. The time has come to expand considerably our program of adult education, and to make more of it the responsibility of our colleges and universities.

The crisis of the time and the rapidly changing conditions under which we live make it especially necessary that we provide a continuing and effective educational program for adults as well as youth. We can in this way, perhaps, make up some of the educational deficiencies of the past, and also in a measure counteract the pressures and distractions of adult life that all too often make the end of formal schooling the end of education too.

6. The time has come to make public education at all levels equally accessible to all, without regard to race, creed, sex or national origin.

If education is to make the attainment of a more perfect democracy one of its major goals, it is imperative that it extend its benefits to all on equal terms. It must renounce the practices of discrimination and segregation in educational institutions as contrary to the spirit of democracy. Educational leaders and institutions should take positive steps to overcome the conditions which at present obstruct free and equal access to educational opportunities. Educational programs everywhere should be aimed at undermining and eventually eliminating the attitudes that are responsible for discrimination and segrega-

tion—at creating instead attitudes that will make education freely available to all.[2]

NUMBER WHO SHOULD RECEIVE HIGHER EDUCATION

Achieving these immediate objectives necessarily will require a tremendous expansion of our educational enterprise at the college level.

It will be noted that many of the Commission's projects focus upon the year 1960. There are several important reasons why the Commission has chosen to look this far ahead. First of all, in the President's letter of appointment, the Commission was asked to direct its energies toward the investigation of long-term policy issues in American higher education. The Commission itself selected the terminal date of 1960 since it was felt that manageable data could be procured for studies up to this point. The basic consideration of population data weighed heavily in the selection. Individuals who will be enrolled in colleges in 1960 through 1964 have already been born, and thus the Commission has a tangible figure with which to make its projections.

The Commission believes that in 1960 a minimum of 4,600,000 young people should be enrolled in nonprofit institutions for education beyond the traditional twelfth grade. Of this total number, 2,500,000 should be in the thirteenth and fourteenth grades (junior college level); 1,500,000 in the fifteenth and sixteenth grades (senior college level); and 600,000 in graduate and professional schools beyond the first degree.

In thus appraising future enrollment in institutions of post-high school education, this Commission has not sought to project the future on the basis of the past nor to predict annual enrollments over the period 1948 to 1960. It frankly recognizes that such a forecast would be subject to unpredictable world-wide social and economic conditions.

Appraisal of Talent

The Commission, instead, has staked out what it believes to be the desirable goal in terms of the number of young people that higher education should serve. In so doing it is expressing faith that the American people will invest in the youth of this Nation whatever full educational opportunity may cost. It is expressing, also, confidence that institutions of higher education will make whatever adjustments

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[2] The following Commission members wish to record their dissent from the Commission's pronouncements on "segregation," especially as these pronouncements are related to education in the South. Arthur H. Compton, Douglas S. Freeman, Lewis W. Jones, Goodrich C. White. A fuller statement, indicating briefly the basis for this dissent, will appear in volume II of the Commission's report.

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are required by the increased enrollments. These changes call for educational institutions sufficiently broad in scope and with character variable enough to serve all young people who may reasonably be expected to benefit both themselves and the Nation by further study.

In arriving at the enrollment recommended for 1960, this Commission gave consideration to the results of the Army General Classification Test: the one test of mental ability that had been given to a large and representative group. During World War II almost 10,000,000 men entering the enlisted Army through induction centers took this test.

Three groups were not included among the 10,000,000: those not inducted because of their illiteracy, those inducted as officers and those deferred because they were "engaged in an essential activity." It is assumed that those rejected for physical disabilities would have been distributed over the range of achievement in approximately the same proportions as those inducted into the Army.

Navy personnel are not included. Although data for that group were made available to the Commission, so large a proportion of the Navy were volunteers that Navy figures are less representative of the general population than those of the Army. The Navy included a higher percentage of high school graduates than either the Army or the general population. Hence, the exclusion of Navy data tends to make the conclusions drawn from Army figures conservative.

It may be assumed that the distribution of ability among women is approximately the same as among men. In fact, such AGCT scores as are available for comparison show no significant differences between the two sexes. Furthermore, although the 10,000,000 men given the AGCT were in a relatively restricted age group, there is no reason to believe that the distribution of mental ability would be significantly different between various age groups.

Study of the probable numbers in the excluded groups which would have a depressing effect on the level of the Army's test scores, together with the numbers which would tend to raise the level, indicates, that for mental ability the 10,000,000 men for whom we have AGCT results are conservatively representative of the general population.

The test data gave the distribution of AGCT scores for military personnel by the highest year of schooling each individual had completed at the time of induction; for example, twelfth grade, fourteenth grade. It was thus possible to determine the lowest typical AGCT score of those who had completed a given grade of schooling. There were many individuals with less formal schooling who scored as high or higher than the lowest typical score for a given grade. It follows that those individuals have a reasonable expectation of completing that grade. This consequence is the basis for the Commission's estimate of the proportion of the total population with reasonable ex-

pectancies of completing an education at specific levels beyond the high school.

It is true that the AGCT does not measure innate mental ability alone; all such tests, to some degree, indicate educational influences. Educational attainment is related to economic status, to the availability of schools, and to other factors which make for variation in individual educational opportunity. If, hence, there had been greater equality of educational opportunity, the proportion of individuals scoring at or above the critical or lowest typical score for, say high school or 2 or more years of college, would have been higher than the proportion estimated by the Commission.

The AGCT has been equated to various other widely used tests. The most important of these is the American Council on Education Psychological Examination—1942 College Edition. ACE psychological tests are administered to entering students by several hundred colleges. In estimating "reasonable expectation" of completing the sixteenth school year, equivalent to college graduation, this Commission took for its base an AGCT score equivalent to the twenty-first percentile of the ACE test; thus, only those who would have scored on the ACE test as high as the upper 79 percent of the group admitted to colleges in 1942 have been counted as having a "reasonable expectation" of completing college.

"Reasonable expectation" of completing the 14th school year was based on a minimum AGCT score equivalent to the seventh percentile on the same ACE test. Those who would have scored in the upper 93 percent of the group admitted to college in 1942 were thus included.

National Inventory of Talent

Upon these considerations, this Commission bases what it believes to be conservative estimates of the proportions of the population with reasonable expectations of completing higher education at specific levels. These proportions which constitute this Commission's "National Inventory of Talent" are:

1. At least 49 percent of our population has the mental ability to complete 14 years of schooling with a curriculum of general and vocational studies that should lead either to gainful employment or to further study at a more advanced level.

2. At least 32 percent of our population has the mental ability to complete an advanced liberal or specialized professional education.

If these proportions of American youth are to be admitted to institutions of higher education, we shall have to provide a much greater variety of institutions and programs than we now have to meet their needs. But the Commission has no way of estimating what effect such modifications of the existing system might have on the number of students to be expected.

The probable shift in social attitudes toward the desirability of increased education, together with economic aid, will lead more people to complete additional years of schooling. These factors would undoubtedly increase the proportions in the "inventory," making the estimates not only conservative but probably minimal.

The specific numbers in the "inventory" (see table 8) were computed on the basis of the expected number in the usual age for attendance at junior and senior college levels. These are persons 18–19 years and 20–21 years of age, respectively. The projected enrollments under the "inventory" for graduate and professional schools, above the sixteenth year of schooling, are based on appraisal of the needs of society for people with such training. Estimates of graduate and professional enrollment reflect this Commission's recommendation on making such education increasingly available. For purposes of estimation, all people in school above the sixteenth grade are considered to be at least 22 years of age.

These estimates may be compared with those of the National Resources Development Report which in 1943 suggested that 90 percent of the youth of appropriate ages should attend high school and 80 percent should graduate.

These enrollments proposed for the various levels of higher education probably do not represent the maximum number of students to be expected. There was a tremendous increase in the number and rate of births during and just after World War II. It was thought at first that this was a wartime phenomenon, but the National Office of Vital Statistics now estimates that it will continue at least through 1947. The number of persons born during the period 1943–46, who will be 14–17 years of age in 1960, is reported by the National Office of Vital Statistics to be 877,000 larger than the number born during the period 1939–42, who will be 18–21 years of age in 1960. There is, therefore, every reason to expect that the population in age group 18–21 will continue to increase after 1960 for at least 4 or 5 years, and that there will therefore be a proportionate demand on institutions of higher education.

Table 7 gives the estimates of college age population in 1952 and 1960, and here 1952 is shown only as a point of interest.

TABLE 7.—*Estimate of College Age Population: 1952, 1960* [1]

Age	Population	
	1952	1960
18–19 years of age	4, 099, 000	5, 104, 000
20–21 years of age	4, 328, 000	4, 595, 000
Total 18–21 years of age	8, 427, 000	9, 699, 000

[1] Source: Unpublished data of the U. S. Bureau of the Census.

This Commission estimates the specific numbers who should receive higher education in 1952 and 1960 in table 8.

TABLE 8.—*National Inventory of Talent Goals for College Enrollment*

	Inventory of national talent	Goals for college enrollment	
		1952	1960
13th and 14th grades	49 percent of appropriate age group.	2, 000, 000	2, 500, 000
15th and 16th grades	32 percent of appropriate age group.	1, 385, 000	1, 500, 000
Above 16th grade	Based on estimated national need.	500, 000	600, 000
Total		3, 885, 000	4, 600, 000

These numbers should be viewed in the perspective of their history. The projection of enrollment trends as they existed prior to World War II gives a possible enrollment of 2,924,000 in 1960. Of these 2,704,000 would be in the thirteenth through sixteenth grades, and 220,000 would be in the higher levels. This Commission's recommendations would increase the number of undergraduates only by about 50 percent more than the continuation of the prewar trends would produce. Obviously then what this Commission recommends is simply an acceleration of trends in higher education as they were before World War II.

This recommendation is an extension also of the constant trend in American democracy to push ever upward the level of education of our people. As the numbers completing elementary school increased until it included most of America's children, the opportunity for free public education was extended through the high school. At the present time the increase in the number of youth who complete high school provides the opportunity and creates the necessity for extending public education upward again, at least through the thirteenth and fourteenth year.

It is with respect to enrollments in graduate and professional schools that this Commission's recommendations would lead to a major increase—about 170 percent. This increase reflects the increasing need of the Nation for citizens with such graduate and professional training.

Only those who view this Commission's recommendations in terms of the situation in, say, 1900 would find them startling. In that year the colleges and universities enrolled less than 150,000 undergraduates, while the estimated potential enrollment was 2,372,000. Year by year

these historic potentials were vastly out of proportion to actual enrollments until about 1930. That year the actual enrollment was 30 percent of the potential. (See Chart 2, "The Gap in Higher Education.")

MORE THAN NUMBERS

To provide adequately for this near doubling of the student load in higher education will require a proportionate expansion and improvement of our educational plant, equipment, and personnel.

We may be sure that the private colleges and universities will, in the future as in the past, contribute immeasurably to the expansion and improvement of our facilities for higher education, and it is to be hoped that they will be able to find the necessary funds without increasing the cost to the individual. But in the nature of things, the major burden for equalizing educational opportunity must rest on publicly supported institutions.

Part of the task ahead is to arouse public opinion once more to an awareness of the transcendent importance of education, so that it will not only support but insist on the necessary increase in appropriations for higher education.

To additional community and State support must be added a very considerable measure of Federal assistance. From the Federal Government must come the funds needed to equalize opportunity between region and region, State and State, city and farm. This Federal aid cannot, to serve its purpose, be distributed equally to all; it must be given in proportion to need. The most must go to those who can provide the least for themselves.

Detailed and specific suggestions for financing this desired expansion in our educational enterprise will be made in a later volume of this Commission's report. Here it is necessary only to point out that the United States can afford what it will cost; indeed, we cannot *not* afford it. It is essential to the continued existence of our way of life.

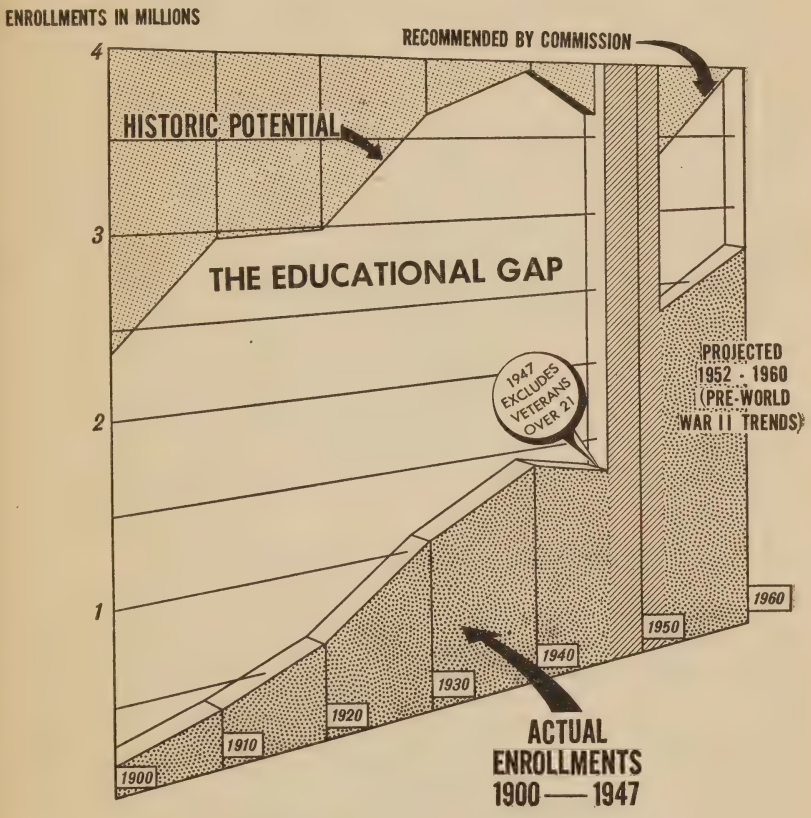
Increase in the numbers to be educated will serve to intensify the problem of devising appropriate and effective programs for higher education. Simply to keep more of our youth in school for a longer period will not of itself, of course, achieve the personal and social ends we have in mind. The measure to which extended educational opportunities accomplish our purposes will depend on the kind of education provided.

As we bring more and more students to the campus, we shall increase in proportion the tremendous variety of human and social needs the college programs must meet. We shall add to the already overwhelming diversity of aptitudes, interests, and levels of attainment that characterize the college student body. And so we shall have to

Chart 2

THE GAP IN HIGHER EDUCATION

UNDERGRADUATE ENROLLMENTS - ACTUAL AND POTENTIAL



Resident enrollments and projection of pre-World War II trends from U. S. Office of Education.

increase the diversification of curricular offerings and of teaching methods and materials to correspond.

Yet in the midst of all the necessary diversity we must somehow preserve and expand a central unity. We must make sure that the education of every student includes the kind of learning and experience that is essential to fit free men to live in a free society.

Education for Free Men

American colleges and universities have assumed a huge task in the last half century. To have opened their doors for so many of our youth was difficult enough; to have done so at a time when the complexity of society was increasing rapidly and its pattern was shifting, so that the ends of education itself were subject to continual revision, was to attempt the nearly impossible. The wonder is, not that the colleges have fallen short in some respects, but that they have achieved so considerable a degree of success.

This is no cause for complacency, however. If still greater expansion in number of students is to be undertaken in a period of still greater uncertainty, higher education must act quickly to bring its policies and programs more closely into line with the social purposes it professes to serve.

THE NEED FOR GENERAL EDUCATION

Present college programs are not contributing adequately to the quality of students' adult lives either as workers or as citizens. This is true in large part because the unity of liberal education has been splintered by overspecialization.

For half a century and more the curriculum of the liberal arts college has been expanding and disintegrating to an astounding degree. The number of courses has so multiplied that no student could take all of them, or even a majority of them, in a lifetime. In one small midwestern college, for example, the number of courses offered increased from 67 in 1900 to 296 in 1930. During the same period the liberal arts college of one of the great private universities lengthened its list of courses from 960 to 1,897.

This tendency to diversify the content of what was once an integrated liberal education is in part the consequence of the expansion of the boundaries of knowledge. New advances in every direction have

added more and more subjects to the liberal arts curriculum and have at the same time limited the area of knowledge a single course could cover. This development is at once the parent and the child of specialization.

Specialization is a hallmark of our society, and its advantages to mankind have been remarkable. But in the educational program it has become a source both of strength and of weakness. Filtering downward from the graduate and professional school levels, it has taken over the undergraduate years, too, and in the more extreme instances it has made of the liberal arts college little more than another vocational school, in which the aim of teaching is almost exclusively preparation for advanced study in one or another specialty.

This tendency has been fostered, if not produced, by the training of college teachers in the graduate school, where they are imbued with the single ideal of an ever-narrowing specialism.

The trend toward specialization has been reenforced by the movement toward democratization of higher education. The young people appearing in growing numbers on college campuses have brought with them widely diverse purposes, interests, capacities, and academic backgrounds. Some expect to enter one of the old-line professions; others want training in one of the numerous branches of agriculture, industry or commerce. Some consider college education a natural sequel to high school; others seek it as a road to higher social status.

The net result of the situation is that the college student is faced with a bewildering array of intensive courses from which to make up his individual program. To secure a reasonably comprehensive grasp of his major field, he must in some cases spend as much as half or more of his time in that one department. The other half he scatters among courses in other departments which, designed for future specialists in those fields, are so restricted in scope that the student can gain from them only a fragmentary view of the subject. He, therefore, leaves college unacquainted with some of the fundamental areas of human knowledge and without the integrated view of human experience that is essential both for personal balance and for social wisdom.

Today's college graduate may have gained technical or professional training in one field of work or another, but is only incidentally, if at all, made ready for performing his duties as a man, a parent, and a citizen. Too often he is "educated" in that he has acquired competence in some particular occupation, yet falls short of that human wholeness and civic conscience which the cooperative activities of citizenship require.

The failure to provide any core of unity in the essential diversity of higher education is a cause for grave concern. A society whose

members lack a body of common experience and common knowledge is a society without a fundamental culture; it tends to disintegrate into a mere aggregation of individuals. Some community of values, ideas, and attitudes is essential as a cohesive force in this age of minute division of labor and intense conflict of special interests.

The crucial task of higher education today, therefore, is to provide a unified general education for American youth. Colleges must find the right relationship between specialized training on the one hand, aiming at a thousand different careers, and the transmission of a common cultural heritage toward a common citizenship on the other.

There have already been many efforts to define this relationship. Attempts to reach conclusions about the ends and means of general education have been a major part of debate and experimentation in higher education for at least two decades.

"General education" is the term that has come to be accepted for those phases of nonspecialized and nonvocational learning which should be the common experience of all educated men and women.

General education should give to the student the values, attitudes, knowledge, and skills that will equip him to live rightly and well in a free society. It should enable him to identify, intrepret, select, and build into his own life those components of his cultural heritage that contribute richly to understanding and appreciation of the world in which he lives. It should therefore embrace ethical values, scientific generalizations, and aesthetic conceptions, as well as an understanding of the purposes and character of the political, economic and social institutions that men have devised.

But the knowledge and understanding which general education aims to secure whether drawn from the past or from a living present, are not to be regarded as ends in themselves. They are means to a more abundant personal life and a stronger, freer social order.

Thus conceived, general education is not sharply distinguished from liberal education; the two differ mainly in degree, not in kind. General education undertakes to redefine liberal education in terms of life's problems as men face them, to give it human orientation and social direction, to invest it with content that is directly relevant to the demands of contemporary society. General education is liberal education with its matter and method shifted from its original aristocratic intent to the service of democracy. General education seeks to extend to all men the benefits of an education that liberates.

This purpose calls for a unity in the program of studies that a uniform system of courses cannot supply. The unity must come, instead, from a consistency of aim that will infuse and harmonize all teaching and all campus activities.

The purposes of general education should be understood in terms of performance, of behavior, not in terms of mastering particular bodies of knowledge. It is the task of general education to provide the kinds of learning and experience that will enable the student to attain certain basic outcomes, among them the following:

1. To develop for the regulation of one's personal and civic life a code of behavior based on ethical principles consistent with democratic ideals.

Many colleges have tended in recent decades to concern themselves with the intellect alone. They have left to other agencies or to chance the student's spiritual and ethical development.

But they obviously cannot leave the whole field of individual purpose, discipline, character, and values to the accidents of environment before and after college. Students should be stimulated and aided to define their personal and social purposes in life. Personal integrity and consistent behavior are impossible where such conscious purpose is lacking.

General education can foster and quicken respect for ideals and values. Wise men, of course, have never doubted the importance of ethical considerations, but for a generation or two these matters seem to have been out of fashion among sophisticated intellectuals. If anything is clear in these troubled times, it is the urgent need of soundly based ideals to guide personal and social relationships in a world where insecurity is steadily weakening trust between man and man.

Interpersonal relations, business relations, labor relations, even international relations, depend, if they are to prosper, on good faith, decent intentions, and mutual confidence. Suspicion of the other fellow's motives and fear that he will not play the game according to the rules are far too prevalent for either individual or national health.

Such a condition is appropriate to a Fascist state, which rests on the rule that no one can trust anyone else; it has no place in a democratic society. To cooperate for common ends, we must have faith in each other.

Ethical principles that will induce this faith need not be based on any single sanction or be authoritarian in origin, nor need finality be claimed for them. Some persons will find the satisfactory basis for a moral code in the democratic creed itself, some in philosophy, some in religion. Religion is held to be a major force in creating the system of human values on which democracy is predicated, and many derive from one or another of its varieties a deepened sense of human worth and a strengthened concern for the rights of others.

2. To participate actively as an informed and responsible citizen in solving the social, economic, and political problems of one's community, State, and Nation.

3. To recognize the interdependence of the different peoples of the world and one's personal responsibility for fostering international understanding and peace.

The urgency of these two objectives and the necessity for heightening the sense of social responsibility they call for have already been pointed out in Chapter II. The extent to which present educational programs are failing to serve these ends is a measure of the importance they must assume in general education in the immediate future.

As a rule the graduates of our schools and colleges have not been adequately prepared for the tasks of citizenship and have been apathetic about performing them. Not only general observation but statistical studies of the attitudes and activities of college graduates have revealed the low level of their civic knowledge and their participation in social action. Many of them were not only uninformed about national and world problems but were markedly reluctant to take part in social enterprises at any cost to themselves. For most of them, direct political activity was limited to marking the ballot on election day, and not all of them bothered to do even that.

We dare not let this state of affairs continue. Every resource of education must be mobilized and focused on the task of establishing in students a habit of social action enlightened by insight into the responsibilities of citizenship at all levels—local, national, and international. Recognition of social planning as a new tool which advances the methods of gathering and appraising information in the hands of democratic society is one of the concepts which general education should seek to make clear to students.

To teach the meaning and the processes of democracy, the college campus itself should be employed as a laboratory of the democratic way of life. Ideas and ideals become dynamic as they are lived, and the habit of cooperation in a common enterprise can be gained most surely in practice. But this learning cannot take place in institutions of higher education that are operated on authoritarian principles.

The varied activities of the campus provide many avenues through which students could participate in making decisions and share in carrying forward their joint undertaking. If the college were conducted as a community rather than as a hotel, it would afford much greater opportunity for students to acquire the practical experience so essential to the life of democracy outside the college.

Nor should the college neglect the educational resources in that life "outside." Including "field experience"—work, travel, research, and study projects in the community off-campus—as part of the program

of general education can do much to break down the present tendency toward isolation of the college from the wider community in which the student is to live after college.

4. To understand the common phenomena in one's physical environment, to apply habits of scientific thought to both personal and civic problems, and to appreciate the implications of scientific discoveries for human welfare.

The scientific account of the natural world must, of course, hold a prominent place in the school experience of all educated persons. To simplify this account and give it relevance for the life and problems of ordinary men is one of the most important and at the same time most difficult objectives of general education.

A just criticism of most courses in natural science is that they are confined to some special field such as physics, chemistry, or zoology, and that most of the study in them is directed toward preparing future scientists and not toward educating future citizens. What is needed instead is the integration of the significant methods and findings of the natural sciences into a comprehensive synthesis that will bring to the general student understanding of the fundamental nature of the physical world in which he lives and of the skills by which this nature is discerned.

That the student grasp the processes involved in scientific thought and understand the principles of scientific method is even more important than that he should know the data of the sciences. The spirit of science—including intellectual curiosity, openness of mind, passion for truth wherever it may lead, respect for evidence, and the free communication of discoveries—should be the product of education at all levels.

General education in science must also emphasize the social significance of science and technology for our times. Failure to understand how science has transformed the conditions under which men live is failure to understand the forces that have reshaped our civilization and now threaten to destroy it. At this of all times it should be clear that understanding the social implications of the sciences is an imperative in general education.

5. To understand the ideas of others and to express one's own effectively.

Developing the skills of communication is perhaps the least debatable of the objectives of general education. Without free, clear, and distinct communication a true meeting of minds does not occur, and understanding and cooperation are retarded if not prevented. And to communicate easily and well with one's fellows one must be able to write and to read, to talk and to listen.

Experience indicates the close relationship that exists between

thought and the symbols that express thought. Clear and precise thinking requires good language habits. Few of the abilities men possess are of greater human significance than their power to order ideas clearly and to set these before their fellows by tongue or pen.

The ability to read—not merely to call words and pronounce symbols but really to grasp the meaning and follow the logic of the writer—is basic to all other human enterprises. To say that the youth in our schools and colleges should learn how to read may seem to be repeating the obvious, but scientific studies have revealed the low level of literacy attained by a large part of our adult population. The experience of college teachers affirms that many students enter the colleges, and not a few graduate, without having acquired more than an elementary degree of practical skill in reading. This skill is a primary objective of general education.

Numbers are also an important means of communication. We call mathematics into service in our daily lives much more frequently than is generally supposed. General education must provide a functional knowledge of the elements of mathematics that industrial society normally requires, and also the skill of quantitative thinking.

6. To attain a satisfactory emotional and social adjustment.

General education does not stop with the development of intellectual powers. For a satisfying and successful life a person must also be emotionally stable and mature, able to endure the conflicts and tensions, the compromises and defeats, that life is almost certain to bring. He must develop the strength of mind and heart to stand alone if necessary, when his sense of justice and good conscience compel him to an unpopular course of action.

As a rule, however, a man's happiness and his achievement will depend in considerable measure upon his capacity for association with others. And this turns more upon personality traits than upon intellectual powers. It is all too often the case that a man is unable to make the most of his abilities because he cannot get on well with people or cannot find his way around easily in the maze of social custom and organization.

American schools and colleges have hitherto paid little attention to the educational implications of this fact. They have been so preoccupied with the training of the intellect, with making sure students could pass examinations in sizable bodies of knowledge of this or that, that they have given little consideration to the problems of personality. General education should correct this deficiency. It should make growth in emotional and social adjustment one of its major aims.

To this end, the student should be taught the nature of human behavior, his own and others'; he should understand the highly important role of emotions in our lives; he should have guidance and prac-

tice in applying this knowledge in his own adjustment to men and life. Instruction in psychology and the social sciences can provide the knowledge he needs, and experience in the wide range of activities afforded by the college community can provide the field for its application and testing.

7. To maintain and improve his own health and to cooperate actively and intelligently in solving community health problems.

In any society human resources are of paramount importance, and when the physical health and vitality of any large proportion of the people are less than they might be, these resources are seriously impaired. The mental vigor and spirit of a people are conditioned by its state of physical health.

Our colleges and universities are doing far less than they might to dispel the ignorance that lies at the root of the ill health of many of our people. Almost all our colleges, it is true, offer many courses that touch in some degree on the principles and practices of healthful living. But these courses are scattered through a number of departments, and the information contained in them is never brought directly to bear on the practical problems of personal and community health.

What is needed is a course that deals specifically and explicitly with the information, attitudes, and habits the student needs to maintain and improve his own health and that of his community. An important phase of instruction to this end will be emphasis on the fact that health is more than a personal problem, that it has social implications, and that the individual owes it to society no less than to himself to keep his health and energy at their peak.

College programs of physical education should provide an opportunity for the student to put into practice his theoretical knowledge of healthful habits. But to serve this purpose, most such programs need reorientation. They should concentrate on the activities that the average person can carry on into life after college, rather than on the training of a few athletes for intercollegiate competition or on the technical preparation of those who plan to make a profession of physical education. The emotional value of participation in "spectator sports" is not to be discounted, but it needs to be balanced by more direct personal activity than is engaged in by most college graduates.

8. To understand and enjoy literature, art, music, and other cultural activities as expressions of personal and social experience, and to participate to some extent in some form of creative activity.

It can scarcely be necessary to urge the importance of literature in the program of general education. Man's consuming interest is in man, and in this interest literature can serve. By means of great novels, poems, plays, and essays one can participate vicariously in many events that one's own life does not encompass, and so can gain

as in no other way imaginative insight into the emotions, drives, and aspirations of one's fellow men.

Literature sets forth both the heights and the depths that man can reach. It is an avenue of communication with the great minds and the great souls of yesterday and of today. It can do as much as any other single form of experience to broaden and deepen the perceptions and sympathies of the individual.

This consequence does not, however, follow from the study of details of literary history, literary biography, literary techniques, or any other of the accompaniments to literature that make up specialization in the subject. The contribution of literature to insight and emotional maturity will come from one's own reading of the world's literary treasures, and from reflection upon them.

The world's literary treasures are not those of the West alone. They include the great intellectual statements of men everywhere and in all ages. There is probably no better way of promoting the intellectual and spiritual unity of mankind than through free trade in enduring literary expressions.

And in the graphic and plastic arts, too, man has recorded much of his thought and feeling about life through color, form, and sound. A signal defect in much of American education, and in American culture, is its failure to recognize that music, painting, sculpture, the dance, the drama, and others of the arts are authentic statements of experience.

One of the tasks of American democracy is to heighten and diffuse esthetic sensibility and good taste, to make our people sensitive to beauty in all its varied forms: in the commodities and services of everyday life, in private and public buildings, in community and regional planning.

The study of the arts in general education should not be directed toward the development of creative artists of exceptional gifts, though it may in some instances lead to this. It should aim at appreciation of the arts as forms of human expression, at awakening or intensifying the student's sensitivity to beauty and his desire to create beauty in his everyday surroundings, at developing bases for discrimination and interpretation, at inducing sympathy with arts and artists and active concern for their welfare. Support of the arts can no longer be left to the patronage of wealth; active encouragement of artistic expression in its various forms must become the responsibility of all citizens.

Before completing his general education, the student should acquire a measure of skill in at least one of the arts or crafts, in some form of musical expression or in dramatics. Participation in creative activity, even at a low level of proficiency, is one of the best means to understanding and appreciation of artistic expression.

9. To acquire the knowledge and attitudes basic to a satisfying family life.

In spite of the fundamental role our culture assigns to marriage and the family, in spite of their encompassing importance for a happy personal life, higher education has in the post concerned itself little with preparing students for their roles as mates and as parents. Here again, pertinent facts and materials have been scattered in bits through the curriculum but until very recently little attempt has been made to integrate them and focus them on the problem as it affects the average person in his everyday life. Courses in "The Family" have been set up for the sociologist, anthropologist, or social worker, but not to meet the needs of the general student.

Such a general course would include, as a minimum, psychological preparation for the emotional adjustments normally called for in marriage; child care and training; the planning of the home, of the physical environment of the family; consumer education in budgeting the family income, in wise buying and spending; and the principles of nutrition, for the proper feeding of the family. None of these matters are new to the college curriculum; only bringing them together in courses focused on the problems of family life is new.

That success in marriage and child rearing does not follow automatically from competence in other spheres is abundantly evident from the broken marriages, broken homes, and maladjusted children that are becoming all too common in America. Education for emotional stability, and probably for social competence and democratic living too, must begin in early childhood. Children reared in a home atmosphere of emotional insecurity, of social isolation, and of authoritarian discipline will not respond readily to education toward other ends in school and college.

General education will render a real service to our society as well as to individual students if it makes preparation for a stable, happy, all-sharing family life one of its primary concerns.

10. To choose a socially useful and personally satisfying vocation that will permit one to use to the full his particular interests and abilities.

Although direct vocational training is not a part of general education, occupational orientation should be. Few things make more difference in the quality of one's life, in one's vigor, good heart, and joy in living, than satisfaction in one's daily work. Fortunate above all others is the man whose way of earning a living is for him also an effective means of self-realization and self-expression. But this happy state seems to be the exception; more often the individual feels a sharp distinction between his earning hours and his living hours.

Satisfactory vocational adjustment might occur more often if there were less occupational snobbery among us, if all forms of useful work were accorded equal social status—manual labor as well as the white-collar job, mechanical skills as well as verbal aptitudes. Through education society should come to recognize the equal dignity of all kinds of work, and so erase distinctions based on occupational caste.

General education should acquaint the student with the interdependence among jobs that characterizes the world at work. It should also make clear the close relationship that exists between one's abilities and interests and his satisfaction in a given line of work. The student should be helped to choose his vocation on a more objective and sensible basis than the ambitions of his parents, his own wishful thinking, or incomplete occupational information.

It is experience on the job that best permits the student to measure theory against practice and to learn what abilities and skills his chosen work will require of him. Some colleges, such as Antioch and Bennington and Black Mountain, have found off-campus work, alternated with periods of study, a fruitful method of helping students to see the relevance of their college courses and to discover their own talents and occupational disposition.

11. To acquire and use the skills and habits involved in critical and constructive thinking.

Ability to think and to reason, within the limits set by one's mental capacity, should be the distinguishing mark of an educated person. The conception long prevailed in our Western tradition that Latin and Greek, mathematics, and formal logic were the most effective instruments for developing the power to think. These disciplines can be made to contribute richly to that end, but so can many others. Development of the reasoning faculty, of the habit of critical appraisal, should be the constant and pervasive aim of all education, in every field and at every level.

Higher education has sometimes seemed to proceed on the assumption that the student can acquire in college all the information about all the subjects he may need to know and use in later years. It has stressed the absorption of as many facts about as many things as possible.

More to the purpose and of much more lasting effect would be emphasis on the student's acquiring familiarity with the processes of inquiry and discovery. Insofar as education is not indoctrination it is discovery, and discovery is the product of inquiry. Arousing and stimulating intellectual curiosity, channeling this curiosity into active and comprehensive investigation, and developng skill in gathering, analyzing, and evaluating evidence—these should constitute the primary job of every teacher from the elementary grades through the

university. The open and inquiring mind and the habit of rigorous and disciplined investigation are the marks of freemen and the sinews of a free society.

General education, therefore, will concentrate, not on the mastery of specific information, but on the fullest possible development of the motives, attitudes, and habits that will enable the student to inform himself and think for himself throughout life. It will stress (1) the importance of being informed, of basing decisions, actions, and opinions on accurate facts; (2) knowledge of where and how to acquire information; and (3) ability to appraise, relate, and integrate facts in order to form valid judgments. The habit of making this approach to any situation can best be developed by leading the student to apply it at every opportunity in his life on the campus, in solving problems both inside and outside the classroom.

METHODS OF GENERAL EDUCATION

The objectives of general education are not to be achieved by prescribing any single pattern of courses for all students. Seeking to gain common goals for all, general education nonetheless approaches these goals through different avenues of subject matter and experience. These avenues must be as numerous and varied as the wide differences among students.

If all students are to attain common goals, much experimentation with new types of courses and teaching materials will be required. Only as these are developed, appraised, and modified to meet the widely varied abilities and needs of students in a democracy can all attain common objectives.

In the Classroom

Established courses in the sciences, social sciences, and humanities can contribute to the ends of general education, but if they are to do so they must be explicitly planned and taught with that purpose in mind.

This does not mean that existing courses designed for future majors and specialists are to be diluted for the general student. General education is not elementary or superficial education. It is no easier than specialized education; it should require no less of the student. The real difference between special and general education lies in orientation and purpose: the function of general education is not to develop the learned man or the professional technician but to provide the basis for intelligent living regardless of the type of life the individual may chance to have or the circumstances that surround it.

The study of English literature, for example, may be an end in itself, quite remote from the concerns of men, a pleasant retreat from the battle of life; or it can, if focused on the problems men face, con-

tribute to the development of ideals, to the understanding of human behavior, to emotional maturity. History can be a memory exercise unconcerned with human values, a mere roll call of names and events; or it can illumine the origin of the social institutions we prize and live by, and clarify the practice as well as the theory of democracy. Sociology can be taught as a matter of dots on a graph or figures in a table, or it can translate statistics into human beings and orient the student to the social world with which he must cope.

So one might continue through the roster of college subjects. Any one of them can be taught as special or as general education, depending on the choice of content and the emphasis in method. Geared to the needs of nonspecialists, general courses will be broader in scope. They will emphasize generalizations and the application of principles rather than the learning of factual minutiae. They will show the relationships between subject matters not ordinarily brought together, and they will cultivate in the student the habit of looking for and discovering broad meanings.

The activities of the classroom in general education will be more closely related to those in the world off-campus. The student and his rounded development will be at the center of instructional activities, and subject matter at the periphery—the reverse of many systematic courses in the various fields of knowledge.

New Courses Needed

But existing courses, however restyled, will not alone serve the ends of general education. New courses of a different kind are needed—courses that draw their material from wider divisions of knowledge, courses embodying unusual combinations of subject matter not closely related within the systematic, logical development of the subject, but intimately related to the psychological processes which human beings use in dealing with everyday matters. Examples would be courses in "Problems of American Life" or in "Science and Civilization."

Such courses call for an integration of content and an attitude toward the student that are lacking both in existing elementary courses and in survey courses. The latter are seldom adequate for their purpose because they have no focus, and the relationships among the various bodies of material of which they are composed are left vague.

In a survey course in the natural sciences, for example, a segment on chemistry may be followed by one on physics, then another on geology, and so on, each segment presented by a specialist as an introduction to the field of his life work rather than as preparation for understanding the place of such subject matter in an intelligent life. For the purposes of general education these interdepartmental courses need much more integration and synthesis.

Another type of general course may be organized around major human problems, drawing from all fields and divisions of knowledge whatever facts and principles are pertinent to these problems. Such a course might consider the relations between the individual and government. Other courses of this kind have been suggested in the sections dealing with healthful living and family life. Those who are able to look beyond the confines of their own subjects can readily find other topics and areas of human activity which lend themselves profitably to this type of treatment.

One of the most urgent needs for such courses is to be found in matters dealing with world understanding. Existing courses in international relations, concentrated as they are on matters of politics and diplomacy, do not serve the purpose. Nor do the standard courses in history, or even divisional courses in the humanities, since in both cases the content is drawn exclusively from the experience of the Western world.

The effectiveness of any general education program will depend on the quality and attitudes of those who administer and teach it. Its success will be commensurate with the faculty members' recognition of the importance of such instruction to society and their willingness to assume initiative and responsibility in reorganizing instruction and rearranging the life of the institution to accomplish its objectives.

Unfortunately the training of college teachers today is oriented so overwhelmingly toward research in some special field of scholarship that all too few are either competent to teach general courses or sympathetically inclined to try to do so. A quite different kind of education for college teachers and a new definition of scholarship and the purposes of higher education in America are basic necessities if general education is to move forward to its goals. Such a revised concept of the purposes of higher education has already been set forth; the reorientation of graduate education, without which little hope can be entertained for the general acceptance of some such new conception of higher education, is described later.

Campus Activities

Formal courses are not the only sources of general education, however. There are a great variety of extra classroom resources in the university community that should be used for educational purposes.

Concerts, recitals, exhibitions, lectures, plays, forums—these are some of the opportunities offered by all the large universities and in lesser number by most colleges of standing. All too often, however, these offerings are considered "extracurricular" or merely "recrea-

tional." That they should be a vital part of the educational experience of students is not recognized and many students neglect them entirely.

In this the students may be reflecting the attitude of classroom-minded faculty members. In any case, college young people should understand that the learning process is not confined to classroom, laboratory, or textbook.

The full range of student activities—in the dormitories, in student government, in clubs and organizations of all kinds, in all the varied social, recreational, and intellectual life of the college—if used constructively for educational purposes, should contribute immeasurably to the outcomes of general education. These phases of student life afford unique opportunities for testing theories of behavior in practical situations. They can provide invaluable experience in the practice of democracy and in social relationships.

But if this purpose of college life is to be realized, more students must participate. Here again, the notion that these activities are extracurricular stands in the way. Both faculty and students must come to accept them as an integral part of the educational program, as valuable components of the learning experience.

Some of the most productive teaching done in the institution can take place in these informal student groups and activities. This assumes, of course, that counselors and faculty advisers will be participants along with the students—not as representatives of the administration, not to dictate or even supervise policies and decisions, but to advise and help, to make available to youth the wider knowledge and experience that have come with special training and maturity.

Cooperative and continuing relationships should be established between faculty members, counselors, advisors of student organizations and residential groups, and student leaders, so that all the resources of student life may be used to advantage in a total program of general education.

INTERRELATIONSHIP OF GENERAL AND VOCATIONAL EDUCATION

Although general education, as the term is currently used, is concerned with the nonspecialized activities of living, it is by no means antagonistic to vocational education. Rightly conceived, the two are complementary. General education should contribute to vocational competence by providing the breadth of view and perspective that make the individual a more effective worker and a more intelligent member of a society of freemen.

It is urgently important in American education today that the age-old distinction between education for living and education for making a living be discarded.

The idea has long prevailed in our tradition, and it is still widely prevalent today, that a liberal education is one thing and professional or vocational education is another, that the two should be sharply differentiated, that one is preparation for labor, the other for leisure.

The modern college dating from the Renaissance, was originally aristocratic in tone. Its purpose was to produce the complete and well-rounded gentleman, the courtier. It sought to fit men of wealth and aristocratic birth for the art of government, to give them enough perspective and breadth to make decisions and formulate policies in administering the state.

Through the centuries it has been extremely difficult to free liberal education from the limitations of its original purpose. Liberal studies have often remained remote from practical considerations, and many educators still persist in keeping them at arm's length from preparation for sharing in the world's work.

Some go so far as to reject vocational education entirely calling it "servile" and to disclaim for liberal education any intention to be useful. Others, admitting the need for both general and special education, still seek to keep them apart in the curriculum. They hold that during a certain period of one's formal education one should pursue the ends of a liberal general education exclusively and then, if interested in a vocation or profession, pursue that with even greater singularity of purpose.

The Unity of Education

Much of present-day educational theory and practice is based on this fundamental misconception of the relationship between liberal and vocational education. The fact is that education is a unified process, developing in the student the qualities of mind and personality required of him both for making a living and for building a life.

The idea that vocational education is "servile" is certainly long since out-of-date. By broadening the basis of government to include all the people, democracy has made it necessary to give to all citizens the education formerly reserved for a privileged class. There can no longer be a distinction between inferiors trained only for practical tasks and superiors trained for government or the professions. Democratic society does not support a leisure class of gentlemen, nor does it distinguish between citizens and workers. Making a living is a function of the citizen and being a citizen is a function of the worker.

To build a richly textured and gracious life is a good and desirable purpose, but few of us can make such a life without first making a living. Cultural values soon take wing when men cannot get and hold jobs.

The ends of democratic education in the United States will not be adequately served until we achieve a unification of our educa-

tional objectives and processes. American education must be so organized and conducted that it will provide, at appropriate levels, proper combinations of general and special education for students of varying abilities and occupational objectives.

Vocational or professional training is essential in our industrial society. It is essential from the viewpoint of the individual who must support himself and his family. Special training is already highly important in the competition for good jobs and for advancement in one's chosen vocation, and the chances are that it will become more so.

Vocational education is necessary, too, from the viewpoint of the State and the Nation. Society has a great deal of work of many kinds to be done, if the social organization is to function smoothly and move forward to higher levels of good living. And society properly looks to the schools to provide the trained personnel for all its vast, complex activities. Institutions of higher education must assume their full share of responsibility for providing a sufficient number of qualified persons in all fields to satisfy the demands of society.

Our purpose, then, is to raise general education to a position of equal dignity and importance with vocational and professional education—to develop a program combining the two kinds of education in suitable proportions and making them interdependent.

Vocational Values of General Education

The complexity of modern technological society demands a high degree of social and economic intelligence on the part of workers in all fields. We have great need of mutually productive and cooperative human relationships among all the groups that share the responsibilities and benefits of economic enterprise.

General education is not alien to the needs of the worker; a review of its objectives demonstrates that clearly enough. A good general education serves to develop those traits of character and personality that are required for success in any occupation. To have some insight into the values and standards that men have found good in governing their lives, to be able to define problems and bring to their solution the habits of critical thinking, to be able to communicate ideas clearly, to possess the ability to deal with people in a friendly and considerate manner—these, more commonly than we think, perhaps, are the elements of vocational competence. And these are among the qualities of mind that general education is designed to develop.

The economic system of old rural America has undergone profound changes. As it has increased in complexity, we have come to rely less on automatic adjustment and more on human decisions and formulated policies. This requires social engineering of high quality, and

also a high degree of economic literacy among our people. The economic problems we face demand on the part of all citizens creative imagination, flexibility of mind, a democratic spirit, loyalty to the public interest, and insight into the organization and workings of our economic system. And these qualities are likely to come more fully from general than from special education.

The demands upon the industrial worker for social adjustment and understanding have greatly multiplied. In many occupations, perhaps in most, it is fully as important that the worker have a healthy and balanced personality and that he know how to play a cooperative role in a great variety of social relationships as it is that he know how to do his job well. And if he is to participate wisely in the determination of broad industrial and social policies, he must possess at least a general understanding of current social and economic problems.

One of the significant changes of our times is the new meaning the machine has given to leisure. Increased technical efficiency has made possible a drastic reduction in the hours of work; it has greatly increased the leisure time at the disposal of the worker. But the machine tends also to fractionalize the experience of the worker, to splinter his personality. Its use calls into play only a part of his total self. Highly repetitive simple operations performed day after day kill the imagination, dull the mind, and fail to give any satisfying sense of creative accomplishment.

Because of the high degree of specialization and division of labor in industry, leisure can no longer be regarded as mere cessation from work. The worker must use his hours away from the job to restore the wholeness of personality the machine tends to destroy. He needs to engage in leisure-time activities that will give him intellectual stimulation and growth, physical exercise and relaxation, emotional expression, and satisfaction of his artistic impulses.

General education can prepare the future worker in industry for this use of his leisure by introducing him to a wide variety of interests and activities that he may cultivate later on.

Another trend that may change substantially the conditions under which many industrial workers live is the movement toward what may properly be considered a new kind of industrial and economic citizenship. As management and labor develop the social skills and meetings of minds necessary to group cooperation and collaboration, the factory is becoming a new sort of community—a medium through which the worker can achieve a satisfying life.

But if workers are to meet their obligations and realize their opportunities in this new community, they will need to be well informed and socially minded, so as to cooperate on equal terms with well informed and socially minded members of management. General edu-

cation must prepare workers for this kind of intelligent participation in labor organizations and in cooperation between labor and management.

The farmer, too, has need of a general education. The sweeping technical, economic, and social changes that have taken place in agriculture in relatively recent years are making new demands upon the farmer. Nowadays he must be alert to social questions and have more than an elementary grounding in numerous matters of public policy. Most national questions have aspects of special concern to the farmer, and if he is to participate in discussing them and acting upon them, he must have something more than a technical education in agronomy, soil chemistry, and animal husbandry.

Moreover, the farmer is a consumer as well as a producer, and his consumption should extend to all the ingredients of civilized living. Observers agree that patterns of consumption in many rural areas need revision, mainly toward greater provision of education, medical and dental care, housing, recreation, and facilities for cultural improvement. Farmers need the satisfactions that come from literature, music, painting, and philosophy as well as those to be derived from material goods. But to get these the farmers must first learn to appreciate what they can add to life, and this appreciation will come from general education.

The land-grant colleges have been a potent factor in the democratization of higher education; they have brought it to the service of the practical affairs of life and of all classes, trades, and professions; they have given dignity to many occupations in both agriculture and industry. Through research and teaching, they have contributed immensely to the increased productivity of farm labor, and through their programs of home economics and their extension service they have enriched the quality of rural life. Their efforts in all these directions should be extended.

The purpose of the land-grant colleges and of higher education generally should be to prepare many young people, including some farm youth, for effective living in a new industrial and urban environment, and to give youth who will remain on the farm both the broad general education and the vocational training they will require for a better command over the physical and human resources of their environment.

THE IMPORTANCE OF COUNSELING

One of the most important instruments for accomplishing the purposes of higher education outlined in this report is an effective guidance and counseling program. In mass education, counseling provides the most likely means for adapting instruction to the individual student.

In diversifying its means and programs to meet the range of interests and abilities of an enlarging student body, the college necessarily assumes the obligation for providing the individual student with skilled and informed guidance in selecting from the variety of college offerings those best suited to his purposes and aptitudes. Unless guidance of this sort is provided, the entire point of the diversification of means will be lost.

An experienced counselor can clarify for the student the purposes of higher education in general and help him define his own educational purposes in particular. Skillful use of measures of ability, interest, aptitude, and previous educational achievement will enable the counselor to help each student to develop a program of courses and activities adapted to his personal needs. Possessing, together with knowledge of the individual, accurate and up-to-date information about the occupational requirements of society, the counselor can offer vocational guidance that may avoid costly mistakes in the student's choice of an occupation. And counseling can lead the student to see the relevance of general education to his vocational goal and to build a program that combines general and vocational education in appropriate measure.

The counseling staff should be large enough and varied enough in training, interests, and experience to provide adequate guidance also in the student's adjustment to the emotional and social problems he meets on the campus. Without this guidance the student may miss the educational value of much of his college life. Without enlightened and enlightening counsel, he may actually derive more harm than benefit from parts of his campus experience. An expanded counseling program is essential to full realization of the enlarging aims of higher education.

Education Adjusted To Needs

To make sure of its own health and strength a democratic society must provide free and equal access to education for its youth, and at the same time it must recognize their differences in capacity and purpose. Higher education in America should include a variety of institutional forms and educational programs, so that at whatever point any student leaves school, he will be fitted, within the limits of his mental capacity and educational level, for an abundant and productive life as a person, as a worker, and as a citizen.

THE COMMUNITY COLLEGE

As one means of achieving the expansion of educational opportunity and the diversification of educational offerings it considers necessary, this Commission recommends that the number of community colleges be increased and that their activities be multiplied.

Community colleges in the future may be either publicly or privately controlled and supported, but most of them, obviously, will be under public auspices. They will be mainly local or regional in scope and should be locally controlled, though they should be carefully planned to fit into a comprehensive State-wide system of higher education. They will derive much of their support from the local community, supplemented by aid from State funds.

Some community colleges may offer a full four years of college work, but most of them probably will stop at the end of the fourteenth grade, the sophomore year of the traditional college. In the latter case they should be closely articulated with the high school.

Whatever form the community college takes, its purpose is educational service to the entire community, and this purpose requires of it a variety of functions and programs. It will provide college education for the youth of the community certainly, so as to remove geographic and economic barriers to educational opportunity and discover and develop individual talents at low cost and easy access. But in addition, the community college will serve as an active

center of adult education. It will attempt to meet the total post-high school needs of its community.

Terminal and Semiprofessional Education

In the past the junior college has most commonly sought to provide within the local community the freshman and sophomore courses of the traditional college curriculum. With notable exceptions, it has concentrated on preparing students for further study in the junior and senior years of liberal arts colleges or professional schools.

But preparatory programs looking to the more advanced courses of the senior college are not complete and rounded in themselves, and they usually do not serve well the purpose of those who must terminate their schooling at the end of the fourteenth grade. Half the young people who go to college find themselves unable to complete the full 4-year course, and for a long time to come more students will end their formal education in the junior college years than will prolong it into the senior college. These 2-year graduates would gain more from a terminal program planned specifically to meet their needs than from the first half of a 4-year curriculum.

For this reason, the Commission recommends that the community college emphasize programs of terminal education.

These terminal programs should include both general education and vocational training. They should be designed both for young people who want to secure as good a general education as possible by the end of the fourteenth grade and for those who wish to fit themselves for semiprofessional occupations.

Semiprofessional training, properly conceived and organized, can make a significant contribution to education for society's occupational requirements. In not providing this sort of training anywhere in existing programs, the educational system is out of step with the demands of the twentieth century American economy.

Because of advancing technology, the occupational center of our economic system is shifting away from the major producing industries. The proportion of the working population engaged in these industries has decreased, while the proportion in the distributive and service trades has increased. In 1880, for instance, about one-half of all workers were engaged in agriculture; in 1947, less than one-seventh of the workers were so engaged.

One result of this development is a new and rapidly growing need for trained semiprofessional workers in these distributive and service occupations. To meet the needs of the economy our schools must train many more young people for employment as medical secretaries, recreational leaders, hotel and restaurant managers, aviators, salesmen in fields like life insurance and real estate, photographers, automotive

and electrical technicians, and so on through a long list of positions in the business and professional world.

Education on the technician level—that is, the training of medical technicians, dental hygienists, nurses' aides, laboratory technicians—offers one practical solution for the acute shortage of professional personnel in medicine, dentistry, and nursing. An adequate staff of well-trained assistants can substantially increase the number of patients one doctor, dentist, or nurse can handle.

For these semiprofessional occupations a full 4 years of college training is not necessary. It is estimated that in many fields of work there are *five* jobs requiring 2 years of college preparation for every *one* that requires 4 years. Training for these more numerous jobs is the kind the community college should provide.

If the semiprofessional curriculum is to accomplish its purpose, however, it must not be crowded with vocational and technical courses to the exclusion of general education. It must aim at developing a combination of social understanding and technical competence. Semiprofessional education should mix a goodly amount of general education for personal and social development with technical education that is intensive, accurate, and comprehensive enough to give the student command of marketable abilities.

Community Center of Learning

Post-high school education for youth is only one of the functions to be performed by the community college. One such college has been known to have a daytime junior college enrollment of 3,000 but an adult enrollment in the late afternoon and evening of 25,000.

The community college seeks to become a center of learning for the entire community, with or without the restrictions that surround formal course work in traditional institutions of higher education. It gears its programs and services to the needs and wishes of the people it serves, and its offerings may range from workshops in painting or singing or play writing for fun to refresher courses in journalism or child psychology.

If the health of the community can be improved by teaching restaurant managers something about the bacteriology of food, the community college sets up such a course and seeks to enroll as many of those employed in food service as it can muster. If the community happens to be a center for travelers from Latin America, the college provides classes in Spanish for salespeople, waitresses, bellboys, and taxicab drivers.

The potential effects of the community college in keeping intellectual curiosity alive in out-of-school citizens, of stimulating their zest for learning, of improving the quality of their lives as individuals and as citizens are limited only by the vision, the energy, and the

ingenuity of the college staff—and by the size of the college budget. But the people will take care of the budget if the staff provides them with vital and worthwhile educational services.

In Relation to the Liberal Arts College

The Commission does not intend to suggest that the expansion of educational opportunity at the freshman-sophomore level should be limited to the community college. Part of the needed expansion can be achieved through existing 4-year colleges, part of it through the lower divisions of the universities.

Some of the established colleges may wish to institute terminal curriculums and contribute to the development of semiprofessional training. Others will prefer to concentrate on general education for students who plan to complete a 4-year course. Still others, especially the liberal arts colleges of universities, may welcome the opportunity to focus their energies on senior college programs.

In any case, the liberal arts college is so well established in the American educational tradition that it need not fear community colleges will weaken its own appeal. It should encourage the development of the community college, not oppose it. Experience indicates that these community institutions awaken intellectual curiosity and ambition in many youth who would not otherwise seek college education at all, and in many cases these students will be stimulated to continue their college careers if the 4-year colleges will meet them halfway with liberal admission policies.

There is little danger of lowered standards in this. We know now that ability to complete successfully the work of the last 2 years of college depends more upon the quality of mind and the mental habits a student brings to his work than upon the nature of the subject matter he has already covered. There is no reason to believe that community colleges, if they are adequately staffed, cannot do as good a job as the lower divisions of 4-year colleges in preparing students for advanced work in liberal and professional education.

While it favors the growth of community colleges, the Commission emphasizes that they must be soundly established with respect to financial support and student attendance. This calls for careful planning on a State-wide basis in determining location of the colleges and the curriculums to be offered. Simply to create more small, inadequately financed institutions would only retard the development of a sound program of post-high school education.

THE SENIOR LIBERAL ARTS COLLEGE

Essential as programs of general education at high school and junior college levels are, they do not alone meet the need for education for responsible living. Many college students deserve and society

urgently needs more liberal education than these lower levels can provide.

We cannot terminate liberal education at the end of the conventional sophomore year and turn the colleges and universities over thereafter to academic specialization and professional education.

Our society is desperately in need of men and women capable of giving wise leadership—the kind of leadership that can come only from those who have read with insight the record of human experience, who know the nature, career, and consequences of human values, who sense the meaning of the social forces operating in the world today, who comprehend the complexities and intricacies of social processes, and who command the methods of rigorous critical thinking.

Advanced courses in liberal education are necessary to force the student to grapple with intellectual tasks of difficulty and complexity. He must have depth as well as breadth in his educational experience if he is to acquire the capacity for intellectual independence. He needs to cut his teeth on solid intellectual matter, reach a higher level of critical thinking, and attain some facility in the methods of scientific investigation.

Excessive Specialization

To put the case for advanced courses in liberal studies, however, is not to sanction present curricular practices in the senior college. It should be possible to provide an education in depth without losing the breadth that is the essence of liberal education. It should be possible to steer a sensible course between overgeneralization and overspecialization.

The elective system was introduced in American colleges in protest against a rigidly prescribed curriculum that, however much it made for a common background among educated men, was too inflexible to meet changing social conditions. Then, when it seemed that too many students were taking advantage of the elective system to keep their college education as elementary as possible, the principle of concentration on a "major" subject was adopted, to make sure that every student's college experience would include a measure of intellectual discipline. But today in many undergraduate colleges, particularly in the large universities, concentration has proceeded so far that it has almost destroyed the historic values of liberal education. It has led to an unwarranted degree of specialization at the undergraduate level.

In one liberal arts college, for instance, an analysis of the programs of students graduating in 1939 and 1940 revealed that some of these graduates had taken as much as half their college work in a single department. Those who majored in English literature took an average of 73 quarter hours in that department, plus an average

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of 16 hours in composition. Majors in political science took an average of only 52 hours in their own department but concentrated a total of 106 hours in the social sciences. Majors in the physical sciences took on the average 95 hours in that field—more than half of the number required for baccalaureate degree.

Such a degree of specialization amounts to vocationalism in liberal education. When the liberal arts college allows its students to specialize in one field of study so early and so intensively that other areas of knowledge are ignored or barely touched upon, it gives up its liberal birthright and becomes in fact a professional school.

The influence of graduate education and the specialized scholarly interests of a graduate faculty are largely responsible for excessive and narrow specialization in the liberal arts college.

Since often there are not enough students in the graduate school to justify giving all the specialities the graduate faculty wishes to offer, these highly specialized courses, dealing intensively with small pieces of a given subject, are opened to undergraduates. The result is that many undergraduate programs are little more than a collection of unrelated fragments of knowledge or a sequence of courses in an extremely narrow field.

The imposition of the narrow specialization of the graduate school on undergraduate education is unfortunate because the purpose of the senior college is basically different. Specialization at the graduate level is organized to train a few highly selected persons for careers in research and scholarship. Programs of concentration in the senior college, however, need to be built around a much wider range of intellectual and occupational objectives to serve a much larger and less selected body of students.

Furthermore, too much concentration too early is bad even for future specialists. The competent expert should be able to view his specialty in the whole context of knowledge, within as well as without the division of studies of which it is a part. The historian should certainly know something of science and the scientist something of history. But so should the physicist be acquainted with the fundamentals of the biological sciences, and the sociologist with the fundamentals of political science.

Specialization is a great good. It has its place in any culture that has risen above the primitive level and in ours it occupies a place of primary importance. Nothing said in this report is to be interpreted as in any way discounting the tremendous gains that have grown out of the efforts of specialists to penetrate ever more deeply into the secrets of nature and the motives and processes of human and social behavior.

The point made here is twofold: that not all college students will become specialists and therefore should not be educated as such, and that the specialist himself will be more effective if he can see how the smaller problem of his special concern is related to larger issues and values.

Broader Fields of Concentration

Most colleges have long had in effect certain rules of distribution which are intended to keep concentration from getting out of hand. But distribution cannot counteract the splintering of the curriculum. Even when a student distributes a reasonable proportion of his credit hours among a number of departments, the individual courses remain fragmentary and the sequences narrow.

Today many institutions are experimenting with plans for broadening the fields of major concentration, and this trend should be encouraged and accelerated. The plans are of various kinds—topical majors, divisional majors, area studies, functional majors—but they are all interdepartmental and some of them cut across divisional boundaries as well.

The aim in all of them is to avoid both the sterility of overspecialization and the superficiality of hasty synthesis; to combine depth with breadth, the advantage of intensive study with the more inclusive view.

The divisional major that seems to have taken hold most widely is that in the humanities. The major is usually made up of a sequence of courses that are themselves divisional in scope, drawing their materials and instructors from the history, literature, philosophy, and fine arts departments. The courses are not, or should not be, surveys organized to give a hurried introduction to the subject, but instead should be integrated around some central theme.

Of the interdivisional plans the most common are the increasingly popular majors in American studies or similar programs centered on the culture of some foreign area or people: Scandinavian studies, Far Eastern studies, Russian studies, and so on.

As these area curriculums develop they should take on an increasing degree of integration. They should do more than bring together a collection of already available courses from various departments. There should be a definite attempt to present in a sound and comprehensive synthesis the geographic, historical, cultural, social, political, and economic elements of a contemporary foreign culture.

In most cases these area programs are both cultural and professional in purpose. They offer an excellent opportunity to students interested mainly in a liberal education, and they also constitute an invaluable preparation for many types of professional service abroad. They can also make an invaluable contribution to the international understanding so needed in our time.

The functional major has been described as "a sequence of courses and other educational activities leading to the attainment of a clearly defined educational or vocational goal." The student, with faculty advice and approval, draws up his own plan of study, selecting subjects that are related to each other and to a well-defined objective and arranging them in a systematic program.

This kind of major is perhaps the most far reaching of the attempts to revitalize the senior college curriculum. Not only does it permit greater flexibility than the conventional departmental major, but it emphasizes purpose and unity in the individual's educational experience. It provides the integration that the modern college has so often failed to achieve and the purpose that liberal arts programs have so often lacked.

The purposes that govern functional majors may be either broadly vocational or cultural. There is no reason to be scornful of vocational motives in liberal arts education. Historically the B. A. degree has had a vocational aim as preparation for the learned professions. It is not out of keeping with the traditional purpose of liberal education to extend it to serve other vocational interests.

However, vocational offerings in the liberal arts college should be built around and based on liberal studies. They should be broader in scope than those in the more specialized colleges and should be of a kind that requires relatively few specific skills—journalism, for example, or general business, or library science.

Liberal education can be thoroughly useful when its relevance to life is brought sharply into focus by a vocational purpose that gives point and direction to the student's program. The danger of futility lies in an unfocused, aimless study of liberal subjects. For this reason the traditional segregation of liberal education in one period of a person's college career and of professional education in another has not served the best interests of either.

The aim should be to integrate liberal and vocational education, letting them proceed simultaneously though in varying proportions throughout the student's college life, each enriching and giving meaning to the other.

General Education in the Senior College

The emphasis to be placed on more intensive study in the senior college does not mean there is no place for general education beyond the sophomore level. On the contrary, general education should be continued throughout the 4-year program.

There is no logical reason why a student majoring, say, in one of the sciences should not be able to take a general course, fitted to his level of maturity, in the humanities or the social sciences in his junior or senior year. A number of institutions are beginning to provide

such general courses at the senior college level, and this development is to be commended.

All these plans for revision and reform in the senior college curriculum are still in the trial stage, and the work of experimentation should be carried on as continuously, vigorously, and speedily as possible.

Whatever the methods developed, the purpose is clear: to provide a well-rounded education that will fit men and women to understand the broad cultural foundations, the significant accomplishments, and the unfinished business of their society; to participate intelligently in community life and public affairs; to build a set of values that will constitute a design for living; and to take a socially responsible and productive part in the world of work.

THE PROFESSIONAL SCHOOL

It may be worth while to reiterate that the pervasive emphasis in this report on the values and importance of the general and liberal phases of higher education is simply a recognition of the shade into which they have fallen and from which, for the good of society, they must be rescued. It does not mean that the Commission in any way minimizes the task the colleges and universities must perform in preparing the vast army of trained personnel required to carry on the work of the Nation.

Estimating Occupational Needs

Educators must study carefully and continuously the professional requirements of society, so that the number of graduates in each field may approximate as closely as possible the estimated need for that kind of service.

In accepting its fundamental responsibility to help individuals prepare to make a living and to help society get on with its work, higher education cannot rely on chance or on automatic processes to determine the number of persons it is to train in the various professions.

Estimating the future needs in the various occupations and the number of persons to be trained to meet the needs is a complicated process in which many factors of varying weight must be taken into account and certain basic assumptions must be made. It is easy to go wrong in such attempts at forecast. Nonetheless, rational planning for the vocational programs of higher education must be based on the best expert estimates that can be made.

The Commission has been provided by the United States Bureau of Labor Statistics with a description of the population and labor force framework within which higher education probably will operate in the decade to come.

The total working population is expected to increase from the current figure of approximately 61,000,000 to 66,000,000 by 1960. The

differential trends in labor-force participation among the various groups in the population are expected to continue. Whereas the anticipated increase in the total labor force from 1946 to 1960 is 8 percent, the number of working women is expected to increase by 13 percent, the number of teen-age workers to decrease by 11 percent, the number of workers over 65 to increase by only 8 percent despite the large population gain in this age group.

Wide variations in the rate of labor-force growth are anticipated also among the different regions of the country. The working population on the Pacific coast is growing at two to three times the national rate, whereas the labor force in the Great Plains stretching from North Dakota to Oklahoma is actually beginning to decline. Between these two extremes are the South, with a rate of growth about 25 percent above the national average, and the great industrial region east of the Mississippi and north of the Ohio, where the labor force is growing at a rate about 25 percent below the national average.

It is anticipated that with full employment, the number of persons employed in professional and semiprofessional occupations will increase from 3,300,000 in 1940, to between 4,400,000 and 4,800,000 in 1950. By 1960 this number may reach 5,100,000. The administrative occupations, in which 3,700,000 were employed in 1940, are expected to require between 5,300,000 and 5,800,000 by 1960, and clerical and sales workers will increase from 7,500,000 in 1940 to between 10,500,000 and 11,000,000 in 1960.

If full employment is maintained, the number of people doing the Nation's work will be 36 percent greater in 1960 than in 1940. With advancing productivity, this means a greater increase in national income, providing an economic basis for continually rising standards of education, medical care, and social service.

All major industries except agriculture will share in the increase, but the greatest growth may be expected in manufacturing, trade, services, and possibly construction. All major occupational fields will expand, with the exception of agriculture and possibly domestic service. A considerable growth is to be expected in the professional, administrative, clerical, and sales occupations, which will give employment to half again as many workers as in 1940.

On the whole, the prospect is for a greatly expanded need for trained workers in most of the occupations that require college preparation. The vocational task of higher education has been a big one in the past; it promises to be much bigger in the future.

The estimated employment and training needs for a limited number of professional fields are reviewed on succeeding pages. Generalizations for other fields cannot be made from these data, but these at least illustrate the kind of statistical analysis that should be made

in all fields of employment for which post-high school preparation is a requisite.

The Need for Teachers. By far the largest and most urgent demand for new personnel is in elementary- and high-school teaching. According to the United States Bureau of Labor Statistics, we must recruit and train nearly 1,000,000 new teachers during the 10 years from 1950 to 1960. In sheer size alone this is a serious and challenging responsibility.

But more serious still is the responsibility of making sure that the kind of education given these persons who are to teach the young will fit them to do the job as it should be done. They must be imbued with the spirit and the methods of free inquiry and skilled in the art of communicating these to others.

To this end specialists in education and those in the liberal arts must replace their mutual skepticism with a cooperative relationship based on recognition of the fact that teachers need to know both what they are teaching and how to teach it.

The responsibility of higher education extends to those who are already teaching. Because of low certification requirements during the war, the need for in-service education of teachers is greater than ever before. If they are to be kept abreast of new teaching aids and devices, of the results of research leading to better understanding of children and teaching methods, and of current developments in the Nation and the world, the colleges and universities must provide them with facilities and materials for continuing education on the job.

The Need for Doctors. The medical profession has grown more slowly than the population in recent years, increasing 13 percent while population rose 43 percent in the three decades from 1910 to 1940. The major factor in this slow growth has been the failure of facilities for the training of doctors to keep pace with the growing demand. During World War II the medical schools increased the number of their graduates by accelerating their program, but almost without exception they have returned to a 9-month schedule and are reducing the potential graduates approximately to prewar numbers.

There is little agreement as to the adequacy of the Nation's supply of physicians. This disagreement results primarily from failure to distinguish between the effective demand for doctors' services and the potential demand.

Under current circumstances the total number of physicians may be sufficient, in urban centers at least, to meet the demand for medical service from those who can pay for it. In times of economic crisis, when purchasing power is low, an apparent surplus of doctors may even appear, as in the depression of the 1930's.

In terms of need, however, as distinguished from effective demand, the shortage is serious and will grow more pronounced in the future. With the development of programs which remove the financial and geographic barriers to medical care and which create additional facilities for the rendering of health services, the present rate of production of physicians will prove increasingly inadequate.

In fact an acute shortage of doctors is to be expected by 1960. According to the Federal Security Agency, merely on the basis of current demand, the deficit will be at least 26,000 in 1960, and if actual and urgent need for better services, such as for general practitioners in local communities, is included, then shortage is increased by an additional 30,000.

Since only about 164,000 doctors were reported in 1940 and at current rates of production and of loss to the profession only about 202,000 can be expected by 1960, the achievement of adequate medical care will require a substantial increase in the output of our medical schools over a long period of years. The production of the 56,000 doctors in addition to those 202,000 who can be anticipated to be in the profession, could be achieved by that date only with a doubling in annual output.

Needs in Dentistry. There are reports that the accumulated dental neglect in the population is so great that 800,000,000 hours of work, or the full time of 400,000 dentists working for 1 year, would be required to do the job.

Adding other factors to this backlog of need, the United States Bureau of Labor Statistics estimates that by 1960 there will be a demand for at least 110,000 dentists—some 40,000 more than were in the profession in 1940. It is estimated that there will be need for another 37,000 dentists to replace those who will be lost to the profession as a result of deaths and retirements during these two decades, and that the total number to be trained by 1960 therefore will be at least 77,000.

Graduations from accredited dental schools totaled about 15,400 from 1940 through 1946. The American Dental Association expects graduations to average at least 3,000 per year for the remainder of the decade, which will mean that new entrants to the profession during the decade will total about 24,000.

To meet the estimated need, more than 48,000 dentists will have to be graduated between 1950 and 1960, and this will be possible only if the capacity of the schools is greatly expanded.

The Shortage of Nurses. The United States Women's Bureau estimated that in 1947, there were needed 359,500 nurses and only 317,800 were available, leaving a national deficit of 41,700. This is in spite of Federal subsidy for the training of nurses during the war.

It is estimated also that the minimum demand for registered nurses in 1960 will be 554,200. Yet there has been a decrease rather than the much-needed increase in nursing school enrollment during 1947. This drop has been due less to restricted capacity in nursing schools and hospitals than to the smaller number of young women who are choosing to enter nursing as a profession.

Even if the number of graduates in nursing could be held to the wartime peak of 45,000 a year, there would still be a serious shortage of nurses in 1960. Active recruitment of students in this field is urgently necessary.

The Need for Pharmacists. According to a study of needs and training in this area made by the Pharmaceutical Survey of the American Council on Education, the experience of the past two decades indicates a fairly stable annual requirement of 2,000 trained pharmacists.

The schools of pharmacy were seriously affected by the depression of the thirties. Recovery was taking place by 1941. However, the result of the wartime Selective Service policies was detrimental to these schools and their ability to meet the country's needs.

For the academic year 1934–35 the enrollment of the accredited colleges and schools was 7,154 and the number of graduates 1,428. Ten years later but 4,144 students were enrolled and 604 graduated. During this 10-year period there was an accumulated shortage of at least 7,500 trained pharmacists for the country.

Beginning with the autumn of 1946 the enrollment increased to 16,000. This rose to approximately 18,000 in 1947. In all probability the greatly enlarged number of graduates will be readily absorbed up to 1951.

The leaders of the profession have recommended to the training institutions that, beginning in 1948 the size of the entering classes be adjusted so as to prevent an oversupply of graduates for the area normally served. These leaders have urged continued cooperation between the State boards of pharmacy of the several States and the training institutions for the purpose of preparing careful estimates of the needs for professional services.

Recommended Expansion in Health Fields. Shortages of professional personnel to take care of the health needs of the Nation must be of serious concern to institutions of higher education. The Commission recognizes the high cost of medical, dental, nursing, and pharmaceutical education, but the cost of institutional service as a result of lack of health care is even greater for the Nation. It is estimated that this amounts to $500,000,000 a year.

The expansion of physical facilities and their maximum use in medical, dental, nursing, and pharmaceutical education should not

be delayed. The training of many more medical, dental, and laboratory technicians, as recommended for the community college, will also help considerably to relieve the existing and prospective shortages in these professional fields.

The Situation in Engineering. According to the American Society for Engineering Education, this profession has grown so rapidly that whatever overcrowding has occurred in the past has been due more to an oversupply of new entrants than to a decline in the number of engineering positions.

The number of employed engineers more than trebled between 1910 and 1940, increasing by roughly 15 percent even in the decade of the thirties, when total nonagricultural employment rose only 9 percent. However, during the depression years the number of engineering graduates exceeded the number of available engineering positions, and the 1940 census found 15,000 unemployed engineers and many engineering graduates who had gone into other kinds of work.

World War II created an enormous demand for engineers, and it is estimated that 50,000 additional persons other than new college graduates were employed in engineering positions during the war. In addition there were nearly 57,000 graduates from engineering colleges from June 1940 through June 1945. However, the demands for engineers, due to the war and later to reconversion, were greater than the supply of engineering graduates, and there was still a shortage late in 1945.

One of the striking trends in industry has been the increased dependence upon engineering and the concomitant greatly increased emphasis on research and developmental work. If any such national program of basic research is developed as that contemplated for a National Science Foundation, it will create a still greater need for industrial developmental research, to implement the discoveries which will flow from the basic research sponsored by the Foundation. This developmental research will demand the services of large numbers of highly trained engineers, many at the graduate level. Furthermore, not all engineering graduates enter the profession, and many of those who do enter it transfer later to other activities, notably to executive and administrative positions.

The actual enrollment in engineering colleges in the fall of 1946 was about 222,000, or nearly 50 percent over estimates made by the Society in the spring of 1946, and a study by the United States Office of Education in the spring of 1947 found that 77,000 students in other curriculums expected to become candidates for engineering degrees at a later date.

If the ratio of engineers to total employment in the industries employing the great majority of engineers remains at the 1940 level, this

great increase in engineering enrollment indicates that the supply of engineering graduates may exceed immediately available engineering positions by June 1950, or perhaps 1949, and that if enrollments continue at their present level, this condition might continue in later years.

One other factor contributing to large engineering enrollments is that engineering education has long been recognized as having great value as general education, and as a good foundation for work in almost any profession. This realization has resulted in a decided trend toward the inclusion of more humanistic and social studies in engineering curricula, in some cases by the addition of a fifth year, in others by reducing the amount of time devoted to technical and engineering subjects.

The possible future surplus of engineering graduates over immediately available engineering positions emphasizes a continuing need for such examination and revision of curricula by the engineering colleges. It also emphasizes the imperative need of a thoroughgoing program of guidance and selection of prospective college students, especially prospective engineering students, so that they may understand the requirements of the profession, the employment opportunities in it, and the possibilities of utilizing an engineering education as general education for citizenship and a greater variety of occupational outlets.

Manpower Planning. An analysis of estimated needs and supply in teaching, medicine, dentistry, nursing, pharmacy, and engineering serves to illustrate the kind of appraisal, in terms both of national requirements and of enrollment trends, that is needed in all professional fields. Without such appraisals neither wise distribution of university funds and energies nor wise vocational counseling of students is possible. Accurate information about need and supply in the professions a student is considering is essential if he is to make a wise choice among them.

A thorough and continuing national survey of professional needs is necessary and should be developed promptly, but only after careful consideration and clear decision as to how it is to be made and under whose auspices. Without such a decision, as awareness of the need for an occupational survey grows, many of them will be undertaken. And not only is this kind of duplication costly; it may well contribute to the danger of competition in the recruiting of professional personnel. Such competition is especially likely to occur in fields and periods of manpower shortage, although these are precisely the places and times when carefully planned use of manpower is most necessary to the Nation's welfare.

Agencies of Professional Training

Various agencies share the responsibility for vocational training at the post-high-school level. Commercial business and technical schools of varying quality provide some of it. Community colleges can furnish much of the necessary training on semiprofessional levels. Senior colleges, normal schools, and teachers colleges carry a sizable part of the load, especially in the training of teachers. But the bulk of what we usually think of as professional education is the work of university professional and graduate schools.

The professional schools are really vocational colleges; their work, though highly technical, is on the undergraduate level. When colleges of education, law, medicine, and the rest offer graduate degrees, they join the loosely organized congeries of schools and faculties that make up the graduate school.

Whenever the training in any vocational field becomes too specialized in its methods and resources to be taken care of in the liberal arts college, a separate unit within the university is likely to be established to provide it. Theology, law, medicine, and engineering are old established professions; education, business administration, journalism, pharmacy, dentistry, nursing, library science, social work, and public administration are among the newer ones whose claim to special professional schools has been widely admitted.

Inadequacy of Technical Training

The danger is that professional education will permit itself to narrow into specialization too early and too exclusively.

As each new profession increases the quality of the scientific data it employs, multiplies its technical methods, and attempts to raise its standards to equality with those of the older, recognized professions, it tends almost universally to strengthen strictly technical training at the expense of more general education.

A greater degree of specialization in professional schools than in liberal arts colleges is to be expected. The vocational motive here is dominant. But the professional schools defeat their own purpose when they allow technical and special courses to crowd general education from their curriculums. Their graduates will need more than a narrow technical proficiency for success in their work. In many fields professional competence depends about as much on knowledge of the ways of men and the world as it does on technical skill.

The practicing physician should know the emotions, aspirations, and social conditions of his patients as well as how their bodies react to disease. A knowledge of ethics and the social sciences is as important in the work of a lawyer as his knowledge of legal precedent. The intricacies of human relations play quite as big a part in the work of the

business executive or the government official as the intricacies of the stock market, the monetary system, or international relations.

All the professions are urgently in need of leadership, of professional statesmanship. They need men who possess disciplined imagination, social awareness, and elasticity of judgment, men who can see beyond the details of their own jobs to recognize professional problems and obligations and take constructive and farsighted action about them.

Professional men must deal with matters of public policy; they must grapple with social issues as these affect their professional interests. But professional leaders themselves testify to the ineptitude and confusion and blunders that result when men who have had only a limited technical education attempt to cope with broad human and social problems.

Fortunately the professional schools themselves are aware of the drift toward too much specialization, and in some instances they are beginning to take steps to remedy the situation.

That general education should parallel technical training in professional schools cannot be urged too strongly. In no other way can the professional man or woman acquire the breadth of training he must have to attain full professional stature and to fulfill his obligations as a leader in society.

Social Obligations of the Professions

Professional men and women must be citizens, too, and the professions must recognize their responsibilities to the society that supports them. They must always consider the social consequences and implications of their policies and decisions. Unfortunately their practices do not always reflect recognition of this fact.

It has already been pointed out that the quota system of selective admission in effect in many professional schools is a form of racial and religious discrimination that is wholly indefensible in a democratic society.

Equally unjustifiable is the tendency in some professions to restrict numbers arbitrarily in order to maintain the prestige of the profession and the market value of its services Natural factors, such as adequate facilities and high costs, are restrictive enough; deliberate limitation regardless of social need cannot be defended.

To use overcrowding of the professions as an excuse, where shortage rather than overcrowding is the actual fact, to justify a planned "economy of scarcity" is to put the good of the individual or the professional group above the general welfare.

The major problem is adequate distribution of our professional personnel. Some cities and areas may have more doctors or pharmacists or lawyers than they need, while others need more than they have.

If we could find a way of securing fair and equal distribution of the graduates of professional schools, we probably should discover that we are nearer starvation than saturation in many of the professions.

Moreover, if professional training were broad rather than narrowly technical, its graduates would not be restricted to practice in one occupation or in one segment of an occupational field. They would be able to use their education in a wider variety of activities.

What we need in this situation is social imagination. Instead of being afraid that we will overcrowd the professions, we should seek ways and means of expanding their horizons of social usefulness, of multiplying opportunities for professional service, of creating new professions and more employment opportunities in some of the old ones.

Our society has not reached the limits of its development. In the whole area of medicine and public health there is need for a vastly expanded professional service. The growing field of communication will open up an array of new occupations on the technical and professional levels. So will developments to come in regional and community planning, in social service, in public administration, in clinical psychology and psychiatry, in personal and social counseling services of all sorts.

And there is no foreseeing what new opportunities, what new occupations and professions, will come with the development of atomic power and its application to industrial purposes. This development is likely to effect changes in our ways of living and working as far reaching as any that attended the historic industrial revolution.

Higher education must be alert to anticipate new social and economic needs, and to keep its programs of professional training in step with the requirements of a changing and expanding cultural, social, and economic order.

THE GRADUATE SCHOOL

Graduate education is the least understood activity in American education. Perhaps this results from the relatively small number of persons concerned with it. Yet, the graduate school is the apex of the university, the last of the progressively selective levels of higher education, and its students are the most advanced on the campus.

Nonetheless the graduate school has paramount influence. It is a powerful factor in determining the course of American life and culture. What it does today determines in great part what the rest of education will do tomorrow. It trains our college teachers and our research personnel. To it belongs the responsibility for scholarship and research, for advancement of the frontiers of knowledge, for the

formulation of the fundamental values and standards of our intellectual life.

The policies and purposes of the graduate school, then, are of primary concern to all education and to all America. Its contributions to social and scientific progress have been far reaching. Its responsibilities today are momentous.

All the more for this reason, analysis forces the conclusion that graduate education is in need of thorough revision.

Social forces have modified, and are continuing to modify at an increasingly rapid rate, the context within which graduate schools must function, and readjustments of a fundamental nature are urgently necessary if these university units are not to block rather than advance the progress of education—and, through education, of the Nation.

The Research Tradition

By 1900 the tradition was firmly fixed in this country that graduate education should emphasize research. This emphasis was primarily the product of three influences: (1) the spectacular results of science with its well-organized mathematical and experimental approach; (2) the need for agricultural and industrial research, recognized in the rise of the land-grant colleges and State universities; and (3) the example of the exacting and meticulous methods of research employed in German universities.

During the first two decades of the twentieth century the major task the universities faced in graduate education, as they saw it, was to improve their methods in research and to standardize procedures and requirements for advanced degrees.

Various professional organizations, such as the Association of American Universities, the National Association of State Universities, the Association of Land-Grant Colleges and Universities, and the American Association of University Professors, joined forces to accomplish these ends. The great foundations, notably the Rockefeller and Carnegie groups, did the same.

These efforts at standardization were all based on the assumption that the program leading to the doctor's degree should aim to train individuals who would engage in full-time research or who would divide their time between their own investigations and the training of other research workers under university auspices.

Up to 1918 this singularity of purpose in the program for advanced degrees appears to have been justified. Phenomenal technological advancement, combined with significant social change was creating the need for many more research workers in industry, agriculture, commerce, and government. And there was need for more penetrat-

ing and fruitful research in the well-established disciplines of the older arts and sciences.

Moreover, activity in research was then confined very largely to the universities; industry and government had not yet entered the field to any marked degree. The graduate student body was comparatively small and homogeneous in both its intellectual capacity and its broad occupational objective.

Changed Concept

But even before standardization had been achieved around the concept of highly specialized research, changes were under way that were to make this concept inadequate.

When the philanthropic foundations began to insist that colleges, in order to receive gifts for themselves or pensions for their teachers, must have on their faculties at least six or eight professors with the degree of doctor of philosophy, and when the accrediting associations began to make similar requirements, forces were set in motion that eventually enlarged the market for holders of the doctor's degree. Many of these now turned from university teaching and research into college teaching at the undergraduate level.

Following World War I this trend was accelerated by the great increase in the size and diversity of the college population at both graduate and undergraduate levels. Expansion at the lower level intensified the demand for more college teachers, which in turn called for expansion at the upper level.

The total graduate student body grew from 5,800 in 1900 to 15,600 in 1920 and to 106,073 in 1940. In the almost half century between 1900 and 1947 the number of Ph. D.'s awarded annually rose from 342 in 1900, to 432 in 1920, to 3,290 in 1940 and to 3,787 in 1947—an over-all increase of about 1,000 percent.

Following World War I, too, changing social conditions brought a need for trained scholarly personnel in many new areas of activity: in a variety of agricultural pursuits, in business and public administration, in education, social work, library science, psychology, speech, geography, physical education, journalism.

The need for trained scholars in these and other fields constituted a powerful pressure on graduate schools to provide new programs of work leading to the doctorate. This pressure was strongly reinforced by the desire of the members of these new professions to raise the social prestige of their occupations by winning academic respectability for them.

The challenge which the rising new professions hurled at the old traditional professions was simply an expression of a basic philosophy in American life: "*a philosophy hostile to the supremacy of a few*

vocations . . . a philosophy moving toward the social equality of all useful labor."

But the traditional learned professions have not yielded ground without argument. How can genuine research be done, they ask, in fields without a research tradition, without any scholarly literature, and on problems of only second-rate importance? They insist that scholarship is, by definition, research scholarship and that all candidates for advanced degrees must be trained in the research tradition.

The argument still flourishes between this group and those who contend that doctoral programs must be adjusted to actual needs in contemporary American life.

Functions of Graduate Education

Those who insist that graduate education must be more functional, that it must be carried on more in terms of what the work of the Nation requires, have a powerful argument in the record of what the holders of the Ph. D. degree actually do in life.

For instance, of the 20,783 persons who had received their Ph. D. degrees during the decade from 1930–31 to 1939–40 and who were employed in September 1940, 65 percent were working in institutions of higher education, 6 percent in other agencies of education, and 29 percent in government and industry. Of those employed in higher education about three-fifths were working mostly at the undergraduate level. Of special significance is the fact that of those employed in 4-year colleges, only 7 percent were principally engaged in research. Only 2 percent of those employed in junior colleges were concentrating on research.

With more than a fourth of the doctors of philosophy going into nonacademic employment in government or industry, the work of the graduate school can no longer be defined wholly in terms of the needs of educational institutions. Since less than a third of the holders of Ph. D. degrees are primarily engaged in research—in educational institutions, industry, or government—it is unrealistic to confine graduate programs to the kinds of experience that contribute in the main to proficiency in research.

The fact is that graduate schools today are engaged primarily in training undergraduate teachers, along with a large number who enter nonacademic occupations. The training of those who will devote themselves to research and teaching others to do research is no longer the sole function of the graduate school. The old singularity of purpose and method in graduate education is gone; the graduate school must now prepare personnel for many types of employment, and no single pattern of training will solve its diverse ends.

If graduate education is to be reorganized and reoriented toward preparing the student for the work he will actually do, the graduate

school will have to assume responsibility for three major tasks: (1) it must continue basic research and the training of research personnel; (2) it must train experts for a host of services in nonacademic fields—government, industry, commerce, agriculture, and public welfare; and (3) it must train teachers for all levels of higher education.

Training in Research. Care must be taken that the research function of the graduate school is not weakened in the attempt to accommodate other purposes and programs. The quest for new knowledge, for objectively established fact, must be carried forward more vigorously and more extensively than ever before. This obligation of the universities will be considered in a later section of this chapter.

Training carefully selected students in the methods and principles of research is the peculiar duty of the graduate school, and this task has taken on transcendent importance today because of the Nation's acute shortage of research personnel. Overcoming this handicap to scientific progress as speedily as possible is an urgent task for the universities.

Those who are to prepare the scientists of the future might give thought to the fact that training in research ought to produce something more than library and laboratory technicians. Scholars should possess breadth of vision, imagination, and the ability to assimilate, integrate, and communicate their findings. In a special report to the President's Scientific Research Board a committee of the American Association for the Advancement of Science comments, ". . . *Too frequently advanced degrees are granted in a narrow field of research, thus producing technicians in a very special field of science rather than scientists.*"

The insight a research specialist may have into the problem of his own investigations is often profoundly conditioned by his knowledge in related areas, and in turn what he discovers may take on its full significance only when seen in relation to other branches of knowledge. General education and cross-fertilization between disciplines are by no means out of place on the graduate level or in the training of scientists.

Providing Experts for Nonacademic Service. For decades now the graduate schools, together with the professional schools, have been supplying highly trained experts for service in many branches of our national life, and they will continue to do so. Their conception of what is needed must be broadened, however. President Truman has publicly pointed out the deficiency in these words:

"*Our national policies must be administered by men of broad experience, mature outlook, and sound judgment. But there is a critical*

shortage of such men—men who possess the capacity to deal with great affairs of state."

The President went on to say that government has long recruited from academic institutions many members of its professional personnel—geologists, physicists, lawyers, economists, and others with specialized training. But, he added:

"*We have been much less successful in obtaining persons with broad understanding and an aptitude for management. We need men who can turn a group of specialists into a working team and who can combine imagination and practicability into a sound public program. . . . Men trained for this kind of administrative and political leadership are rare indeed.*"

Spokesmen for industry have voiced the same need, the same problem. Expert knowledge and technical proficiency are not enough. This is the problem that makes general education and revitalized liberal education a necessary accompaniment to vocational and professional education at every level of higher education, the graduate school included.

Preparing College Teachers. It is in the preparation of college teachers that the graduate-school program is seriously inadequate. Its single-minded emphasis on the research tradition and its purpose of forcing all its students into the mold of a narrow specialism do not produce college teachers of the kind we urgently need.

The more alert and thinking among college administrators have for years been asking, usually in vain, for teachers with different training and different skills. They want teachers with less-narrow interests and more intellectual curiosity and *aliveness;* teachers with more stimulating personalities and more experience of the world off the campus; teachers with more ability to synthesize and interpret facts; teachers with more ability to communicate ideas and attitudes.

Without such teachers general education and liberal education of broadened scope are impossible. Without such teachers we shall not achieve the objectives and the programs recommended in this report. The graduate schools must provide the sort of educational experience that will produce such teachers. The present requirements for the doctor's degree will not do so.

Perhaps the place to begin the process of reform is with the graduate faculties themselves. In few cases can the same man function satisfactorily on the level of intense specialization and preoccupation with research and also on the level of broad synthesis and general education. Not many men can serve two such different masters. A special effort should be made, therefore, to add to graduate teaching staffs men of broad knowledge, men of imagination and understanding, and wisdom. They can then educate others,

who will educate others and others, on through the whole educational system.

The Graduate Student Body

Graduate students are, it is true, a highly selected group, but the selection is largely by natural processes. All too often an individual becomes a graduate student because he lacks the energy or the initiative or the social know-how to do anything else. He clings to the shelter of the campus, fears the competitive struggle in the world outside, and so goes on from degree to degree as long as he can.

Yet certainly candidates for the important functions of college teaching and research should be as carefully selected as candidates in medicine, law, or business. A more careful screening of applicants for graduate education, with equal concern for qualities of personality and for potential scholastic achievement, should go far to improve the final product.

Once admitted to the graduate school, the students should not be allowed to live as close to the ragged edge of existence as many of them now do. Especially those of them who are to be teachers of youth should be expected to live balanced, well-rounded lives, acquiring social skills and experience. And if the individual cannot afford the costs of such a life for himself, the university or society should help him bear them. If he has enough promise to be worth education at this level, he is worth educating well and in all ways.

Proposals for Reform

Various proposals have been made looking toward reform. Some have suggested that the graduate school be divided into a research institute for the training of research personnel and a graduate college for the training of college teachers. Others are strongly of the opinion that such a division is unnecessary and unwise, that the several tasks of the school can be performed just as well without so sharp a separation between education and research and, in fact, that some experience in research is a significant means of intellectual development, even for those who will not make research their career.

Some have proposed the use of a new degree, doctor of arts, to mark those whose graduate program has been aimed at high general competence rather than intense specialization, reserving the doctor of philosophy degree for those students who have had rigorous training in research. Others oppose this as unnecessary, arguing that the letters of the degree do not matter, that only the transcript of a student's record and the real nature of his accomplishment can tell one anything about his preparation.

To devise new patterns of organization and programs of instruction that will perform the three functions stated above, is the current prob-

lem of graduate education. It involves difficult problems of administration and organization. The weight of a long and successful tradition and the powerful resistance of those who have vested interests in the old ways will have to be overcome. The entire task confronts higher education with one of the severest tests an institution can face: It is said that an entrenched priesthood will never reform itself; American graduate school faculties must demonstrate the falsity of this axiom.

More basic than these proposals to the achievement of reform in graduate education is the need for a new definition of scholarship. As long as scholarship is defined solely in terms of the research tradition, so that the rewards of scholarship, both in salary and in prestige and preferment, go to those who win distinction in research and the publication of research, plans for a broader orientation in graduate education will remain scraps of paper.

Our conception of scholarship must be enlarged to include interpretive ability as well as research ability, skill in synthesis as well as in analysis, achievement in teaching as well as in investigation.

These divergent capacities sometimes occur in the same individual, but not always. Universities do not hesitate to appoint an outstanding scholar or to advance him in rank even though he is a mediocre teacher; it is quite as defensible to appoint and advance a distinguished teacher even though he is not a "productive" scholar. Universities need both types of talent and the two should be given equal weight and recognition in academic circles.

The detached, perceptive scholar, is still sorely needed—in increasing numbers and in all disciplines. But if higher education is to discharge its social obligations, scholars also are needed who have a passionate concern for human betterment, for the improvement of social conditions, and of relations among men. We need men in education who can apply at the point of social action what the social scientist has discovered regarding the laws of human behavior.

THE RESEARCH PROGRAM

Advancing the frontiers of knowledge through research and the training of research men is still a supreme obligation of the university. And this function of higher education is becoming increasingly vital to the health and strength of our national life.

The importance of maintaining a proper balance between research in the physical and biological sciences and in the social sciences and humanities cannot be urged too strongly.

The case for the development of social technology as one of the imperative needs of our day is stated in Chapter II of this volume.

The present crisis in human history has come about largely because discovery in natural science has raced so far ahead of discovery in social science and in human behavior. We shall only be courting further disaster if we divert a disproportionately large measure of our financial and human resources into research in the natural sciences and continue to neglect the social sciences and the humanities.

It will be a little short of tragic if provision for social research is not included in the program of Federal support and organization planned under a National Science Foundation. Certainly the destiny of mankind today rests as much with the social sciences as with the natural sciences.

Shortage of Manpower

The report of the Chairman of the President's Scientific Research Board tells us that the ultimate obstacle to national progress in research in the natural sciences is the shortage of trained scientists. The number of competent men available, not the amount of money, is the limiting factor in research.

The United States did not safeguard its scientific manpower during the recent war as other nations did, and consequently we now do not have enough trained personnel to staff the research and development laboratories of industry, government, and the universities.

With the present increased college enrollments, this numerical shortage can be overcome in the next few years, but maintaining the quality of scientific training is a problem. The universities are finding it difficult to recruit enough competent teachers to provide the amount and quality of science instruction they are called upon to provide.

The Research Triangle

During the past 25 years the responsibility for research has moved, more than is commonly recognized, from the universities to industrial and government agencies. In 1930 university expenditures were 12 percent of the total national budget for research and technical development in the natural sciences; whereas during the period 1941–45, university expenditures averaged only 2 percent of the total excluding amounts for research in atomic energy.

Federal Government expenditures for research and development rose from $23,000,000 in 1930 to $67,000,000 in 1940; in the same period the research and development budget of industry increased from $116,000,000 to $234,000,000. University expenditures in these fields also increased during these 10 years, but at a much slower rate: from some $20,000,000 in 1930 to $31,000,000 in 1940.

Of the 137,000 persons engaged during 1947 in scientific research, development, and teaching, 57,000 are employed in industry, 30,000

in government, and 50,000 in colleges and universities. The universities' share of the manpower pool in science fell from 48 percent in 1930 to 36 percent in 1947.

Competition for personnel among the three sectors of the research triangle is not in the public interest. Because of the lower salaries paid in educational institutions, such competition tends to concentrate the manpower shortage in the universities and makes it difficult for them to get and keep the most able men—those who should be training others.

While the current shortage continues, expansion of one sector of research can take place only at the expense of the other two; growth in governmental and industrial research will necessarily curtail research in the universities. And curtailment in the university sector will imperil the Nation's future in science because (1) it will impede progress in basic research and (2) it will lower the quality of the training given future scientists.

A survey made by the President's Scientific Research Board revealed that deterioration is already evident in the quality of training in the natural sciences because of the shortage of qualified teachers and of laboratory and other facilities. And the situation is expected to grow worse as the large numbers of freshmen and sophomores reach advanced levels and require more experienced teachers.

In a matter so important to our national welfare, wisdom would suggest that a measure of cooperative planning replace competition among the various agencies engaged in research. Voluntary acceptance of necessary restrictions now would insure improved conditions a few years hence.

Importance of Basic Research

It is imperative that basic research, largely suspended during the war, be resumed and expanded. The great gains of applied research in the nature sciences were made possible during the last few years only because scientists had for decades been exploring the fundamental nature of the physical universe. Their patient pursuit of knowledge for its own sake provided the reservoir, the capital reserve, upon which the Nation could draw in time of emergency. That reserve now stands in urgent need of replenishing.

In the past, American scientists have contributed more to technical development than to fundamental science. We have depended largely on the men and the laboratories of Europe for advance in basic research. This we can no longer do, partly because conditions in Europe do not promise much strength in science for some time to come, and partly because the free exchange of ideas among scientists of all nations is, temporarily we hope, impeded by the unsettled state of the world. America is now on her own in accumulating a stock pile of

fundamental scientific knowledge as a basis for technological development.

For this reason any national program of scientific investigation—both in the natural and social sciences—must put proper emphasis upon basic research, and basic research is best committed to the care of the universities. It is what they are best equipped by function to do, and they can contribute much more to the Nation's progress in science by concentrating on this aspect of research than by turning themselves into institutes of applied science.

Financing Research

University scientists would undoubtedly prefer to devote their time to fundamental investigation, but they face a practical financial problem. Research is expensive. It takes time; it requires men of superior ability and training; it calls for adequate laboratory facilities and equipment. And money to provide these requirements comes most readily with Government and industrial contracts for applied research. The pressure to be practical, therefore, is almost more than university administrators can withstand. They are constantly tempted to accept contracts for applied research in order to augment their inadequate budgets. Nevertheless, the universities have a greater duty, as the President's Scientific Research Board pointed out: ". . . *the principal function of the colleges and universities is to promote the progress of learning and they must be the primary means through which any expanded program of basic research is carried out.*"

If university research is to be concentrated on basic investigations, financial assistance in substantial amounts must be provided. Vastly increased public appropriations, both State and Federal, are a necessity. In the past, gifts from philanthropic foundations have been of inestimable value in promoting research, but these would be entirely insufficient to meet present needs.

It is expected that in the future, at least one-half the national research budget will have to be provided by the Federal Government. This does not mean that one-half the work needs to be done in Government laboratories, where the emphasis is likely to be on technical development rather than on basic research.

This Commission recommends that a substantial part of Federal support for research be given in the form of financial assistance to undergraduate and graduate students in science through the total program of scholarships and fellowships described in the volume of this Commission's report, "Equalizing and Expanding Individual Opportunity," leaving it to the recipients to choose the areas in which they will work and the institutions, public or private, which they will attend.

This program of assistance to scientific research should not stand alone; it is recommended that it be a part of an over-all national scholarship and fellowship plan that includes all branches of higher education.

Free choice should exist in education as in all other areas of living in a democracy, and since no man can foresee the needs of the Nation in a more distant future, free choice will in the end serve society better than an attempt to direct developments. This fact, however, lays upon colleges and universities the obligation of providing students with adequate information about national occupational needs, so their free choices may be intelligent and properly based.

It would be wise also for industry to make funds available for university programs of basic research under the broadest possible terms. In the long run unconditional support of basic research would pay rich dividends to industry, because the success of applied industrial research depends on sustained advance in fundamental science.

Control of Research Results

There are no precise divisions, but research is generally considered to fall in one of two categories: basic research, or applied and developmental research. The first has as its purpose the seeking of new knowledge to push back the frontier of the unknown; applied and developmental research aims toward the extension of basic research to a specific application, generally involving the creation of a new product, process, technique, or device.

The findings of each type of research are important social resources, equal in value to the richest of our natural resources. To control or attempt to control the discoveries of the laboratory, whether these be fundamental principles or formulas for immediate application, may be to control in large measure the economic and perhaps the social destiny of a people—or indeed of many peoples.

The control of these resources has been a matter of public policy in this country. From the earliest period of our history the Government has granted patents, which are instruments of control, as a protection and incentive to individual enterprise. As a matter of public policy the duration of the control under a patent and its inviolability have been specified. Further, patents have been offered only for items which are "new and useful", thus limiting them to the results of applied and developmental research. Another example of control is that which applies to military weapons, which are in essence research results, and have been kept secret as a matter of national security. In essence, each of the research results to which control has applied has been the fruit of applied or developmental research.

But basic research should not be subject to such controls and restrictions. Control of these resources, and of the power which control offers, cannot be left to private hands or commercial interests. It is vital to society that the findings and products of such research shall be devoted to the general, not the individual, welfare.

Nor should control and direction of basic research be entrusted to military authorities. Civilian control of matters affecting the public welfare, even if high military policy, has always been the American way, and it would be disastrous to depart from it in so vital an area as scientific investigation.

To the extent that any discovery of science has possible uses for waging war, military men will have a proper concern in its development. But theirs must never be allowed to become the sole or the primary purpose in basic research.

The importance of this proscription springs in part from the necessarily divergent methods of men of science and men of arms. The nature of their profession requires military men to be secretive and cautious. The directors of the research programs of the armed forces generally have shown an admirable spirit in their understanding of the principles of freedom of inquiry. Nevertheless, they must think in terms of enemies and allies, of spies and counterspies, of weapons of attack, and methods of defense. They could not otherwise perform their duty to the country.

But this frame of mind is alien to the spirit of science. Freedom of investigation and freedom of communication have been the lifeblood of science, and scientific progress depends on full and free sharing of new knowledge—so that the success and failures of one man may further the work of all others.

Secrecy of research results in some cases is essential to national security. But secrecy of the results of fundamental research is stultifying and hampering to science.

ADULT EDUCATION

An expanded program of adult education must be added to the task of the colleges. This is a vital and immediate need, because the crucial decisions of our time may have to be made in the near future. Education for action that is to be taken, for attitudes that are to be effective, in the next few years must be mainly adult education.

Its Place in Higher Education

The continuing education of the adult population is carried on by many agencies, by some as a deliberate aim, by others as a byproduct not always recognized as education. But the colleges and universities are the best equipped of all the agencies, from the standpoint of re-

sources, to undertake the major part of the job. Education on a near adult level is their business, and they have, in some measure at least, the necessary teachers and facilities.

The present status of university extension services makes it painfully clear that the colleges and universities do not recognize adult education as their potentially greatest service to democratic society. It is pushed aside as something quite extraneous to the real business of the university.

This attitude is fostered by the necessities of adult education. It takes place outside regular college hours and usually off campus. It makes use of faculty members in other units of the university, and for these men extension or correspondence courses are usually extra chores they agree to add to their regular teaching load in order to supplement their inadequate incomes. In this frame of mind, many of them candidly get by with as little expenditure of energy as possible.

This state of affairs cannot be permitted to continue. The colleges and universities should elevate adult education to a position of equal importance with any other of their functions. The extension department should be charged with the task of channeling the resources of every teaching unit of the institution into the adult program.

Adult education, along with undergraduate and graduate education, should become the responsibility of every department or college of the university. It should be the duty of the English faculty or the physics faculty, for instance, to teach English or physics not just to those who come to the campus, but to everyone in the community or the State who wants to learn, or can be persuaded to want to learn, English or physics.

To this degree every college and university should become a "community college." Then extension teaching would be accounted a part of the regular teaching load and would receive its due share of faculty energy and interest.

Granted that this would increase the job of the institution many times over, that it would require more teachers, more manpower in administration, and a very considerable increase in the budget. The principal obstacle to acceptance of the program, nonetheless, is the limited concept that higher education still holds of its role in a free and democratic society.

It must broaden that concept. It must cease to be campus-bound. It must take the university to the people wherever they are to be found and by every available and effective means for the communication of ideas and the stimulation of intellectual curiosity. It must not hold itself above using all the arts of persuasion to attract consumers for the service it offers.

Adult education in the past has been much too inflexible, much too bound by traditional notions of proper educational procedures. Extension activities for years have been stultified by the idea that adult education consists merely of the transmission to mature people of campus courses developed to meet the needs of adolescents.

Fitting Method to Student

Adult students are not conscript classes. Already established as wage earners, most of them, they do not have to go to school; they have a wide range of activities from which to choose a way of spending their leisure. And adult education is, in most cases, a leisure time activity. The students come to the class or the correspondence lesson at the end of a full and probably tiring day. They want release from the tension of their jobs. They appreciate a much greater degree of informality in atmosphere and method than characterizes most campus classroom teaching.

The program of adult education must be fitted in content, methods, and aims to the adult student as he is, not as the college or the professor thinks he should be.

If adult students are to remain in the class, once enrolled, they must be stimulated and interested. There is nothing to prevent them from dropping a course that does not interest or benefit them, nothing to prevent them from walking out on a teacher who is dull, rambling, and irrelevant.

Adult interest in further education is not predominantly vocational. Many enroll in extension courses to fit themselves for a better job, but many others are motivated by a desire, often vague and fumbling, for self-improvement, which they think a course in literature or history or current events should give them. The majority of them will demand substance in the lecture or the discussion but they will not suffer gladly much academic or specialist jargon.

Vigorous Experimentation

Courses by extension or by correspondence may not be the best means of educating adults; they certainly are not the only ones. Vigorous experimentation with new methods, however unorthodox, is called for.

With the demonstration constantly before us of the appeal and the effectiveness of motion pictures, higher education has been inexcusably slow in the development of visual education. That documentary and educational films could become teaching instruments of great power cannot be doubted. They are becoming so in the elementary and secondary schools.

But all too often the visual education department of the university is relegated to the status of a self-supporting service enterprise, along with the cafeteria or the bookstore, instead of being recognized as a

vital educational unit worthy of a substantial budget and the encouragement of administration favor and interest. If use in the adult program brings visual education into its own, all of higher education will benefit.

The great influx of students into the universities and colleges immediately after the war has given much impetus to the development of visual education and other technical aids to learning. The considerable divergence in reading skills and achievement on the part of the students has made it necessary to find devices which make the teacher's presentation more vivid. The greater number of students per teacher and the lack of preparation on the part of many new teachers has augmented the need for effective training aids.

The experiences of the armed forces in World War II affords an excellent example for institutions of higher learning as they cope with the problems of mass education. During the war the service's training schools were faced with the necessity of evolving effective and rapid methods for mass instruction. With a practically unlimited budget they made marvelous strides in the development of motion pictures, strip films, transcriptions, mock-ups and other learning devices. The primary and successful application of these devices to wartime training purposes suggests the need for further exploration in an effort to develop similar devices for peacetime academic instruction.

There are currently certain handicaps to an extensive development of the use of technical aids at the college level. Primarily the meagerness of existing materials available for use in higher educational instruction retards this development. There is also a lack of information and centralized distribution of such materials as are presently in existence. Several institutions notably Rutgers, Pennsylvania State College, the State University of Iowa, and Vassar, have developed effective materials for their own use. Doubtless these materials would have wider application and use in other institutions if a procedure for interchange of information and actual materials were developed.

This Commission recommends the establishment of a continuing committee devoted to the study, development, and utilization of technical aids to learning in higher education.

Such a committee should deal with four major areas of responsibility. In the first place, it should provide facilities for coordinating information on existing materials and develop a plan for the interchange of these materials among interested institutions. Secondly, the Committee should arrange for continued study of the special devices developed by the Navy, Army, and Air Corps to discover possible applications these developments may have for civilian instruc-

tion. Another important activity would be the stimulation of individual institutions or groups of institutions in a program of integrated effort at developing further basic-training aids. This committee should also assume responsibility for wide publicity on the advantages and objectives of technical aids in higher education.

The Commission is of the opinion that the work of such a committee would be most effective by having it attached to some existing educational organization which has sufficient prestige to challenge the serious consideration of institutions of higher education.

University owned and operated radio stations are another agency for adult education whose possibilities are all too seldom exploited. Their influence and appeal where they exist is widespread.

Yet here again the universities are niggardly and slow. The Federal Communications Commission has set aside twenty bands on the FM spectrum for the use of educational institutions, but the colleges are not taking advantage of the opportunity thus offered them. They are repeating the mistake they made 20 years ago when they failed to take up the channels reserved for them in the AM spectrum. The FCC cannot be expected to hold out against the pressure of commercial interests that want these FM bands if the colleges and universities show no interest in making use of them.

Objectives of Adult Education

Whatever methods may prove best for reaching and instructing large numbers of the adult population, the purposes of the program are in large measure those of higher education in general. The adult program is not an additional objective of the college; it is one of the means by which the college can achieve its general objectives.

The knowledge, attitudes, and activities necessary for responsible citizenship in our free society cannot be left to the oncoming generation; they are needed now. The urgent necessities of world-wide understanding and cooperation cannot be postponed until the insight and good will upon which they depend have been developed in a new generation; they call for thought and action now.

Higher education will not play its social role in American democracy and in international affairs successfully unless it assumes the responsibility for a program of adult education reaching far beyond the campus and the classroom.

The Social Role of Higher Education

The task that President Truman assigned to this Commission was to define the responsibilities of higher education in American democracy and in international affairs, and to reexamine the objectives, methods, and facilities of higher education in the light of the social role it has to play.

In the first volume of its report, this Commission has declared its conviction that if American higher education is to fulfill its responsibilities in the second half of the twentieth century, it will have to accelerate its adjustment in purpose, scope, content, and organization to the crucial needs of our time. It will have to act quickly and boldly if it is to fit students for meeting the new problems and necessities America faces as the Nation takes on a responsibility for world leadership that is without parallel in history.

American colleges and universities must envision a much larger role for higher education in the national life. They can no longer consider themselves merely the instrument for producing an intellectual elite; they must become the means by which every citizen, youth, and adult is enabled and encouraged to carry his education, formal and informal, as far as his native capacities permit.

This conception is the inevitable consequence of the democratic faith; universal education is indispensable to the full and living realization of the democratic ideal. No society can long remain free unless its members are freemen, and men are not free where ignorance prevails. No more in mind than in body can this Nation or any endure half slave, half free. Education that liberates and ennobles must be made equally available to all. Justice to the individual demands this; the safety and progress of the Nation depend upon it. America cannot afford to let any of its potential human resources go undiscovered and undeveloped.

The wider diffusion of more education, however, will not serve the purpose unless that education is better adapted to contemporary needs. The first and most essential charge upon higher education is that at all its levels and in all its fields of specialization it shall be the carrier of democratic values, ideals, and processes.

Democracy as a way of life uses varied institutional forms and changing patterns of cooperative association as time and circumstances may require, but it holds fast to its abiding elements: Its respect for human personality, its insistence on the fullest freedom of belief and expression for all citizens, its principle that all should participate in decisions that concern themselves, its faith in reason, its deep obligation to promote human well-being. These ideals and the processes through which they are translated into individual and social behavior must permeate American education from the nursery school through the highest reaches of the graduate and professional schools.

It is imperative that American education develop a "democratic dynamic" that will inspire faith in the democratic way of life, dispel doubt and defeatism about the future, and imbue youth with the conviction that life has high purpose and that they are active and responsible participants in that purpose.

At the same time and with equal urgency higher education must prepare Americans to contribute their utmost to the achievement of world order and peace among men. To this end it should seek to inculcate in students a sympathetic understanding of the cultures and peoples that make up the world community. Higher education faces no greater challenge than that of securing, and securing in time, a widespread recognition of and adjustment to the oneness of the modern world. The task of the colleges here is to make the transition from a curriculum centered almost exclusively on the American-West European tradition to one that embodies the intellectual experience of the whole of mankind.

E Pluribus Unum—From many persons one nation, and from many peoples one world—indivisible, with liberty and justice for all. A strong and dynamic national community, intertwining in harmony and unity of purpose an infinite variety of individual talents and careers, and in time a strong and dynamic world community, embracing in brotherhood and mutual respect a rich and enriching diversity of national cultures. These are the twin goals which America, and therefore its institutions of higher education, must strive to attain.

THE CURRICULUM

Incessant search for new knowledge through research, unceasing effort to plumb the meaning of life and the enigma of man's behavior through interpretive scholarship, the cultivation of gifted minds, the provision of professional education to satisfy the occupational needs of society—these are the established tasks of higher education. They are vital tasks, and their performance must be constantly improved and strengthened. But to them now higher education must add a sufficient variety of organizational arrangements and curricular offerings to encompass the wide range of individual differences in capacity and purpose that increasing the number of students will bring to college.

At the same time there must be sufficient unity of purpose in this essential diversity of higher education to produce a community of values and ideas among educated men. The complexity of modern society requires a great variety of talents and many kinds of competence for its successful functioning; yet without some commonality of purpose, values, and experience we shall not achieve the reconciliation of differing opinions and interests that is the lifeblood of democracy.

FEDERAL AID

The radical character of the adjustments required in higher education, their magnitude, and the pressure of time, all mean that neither individual institutions nor national educational organizations have the resources to effect the necessary changes without outside stimulation and financial assistance. These, the Commission believes, will have to come from the Federal Government.

The particular ways in which Federal support and encouragement should be given will be discussed in later reports. Here, this Commission wishes only to point out that such aid to higher education is a proper concern of the Federal Government, because the health and strength of higher education is a matter of serious national import.

The Federal Government assumes responsibility for supplementing State and local efforts in military defense against the Nation's enemies without; surely it may as justifiably assume responsibility for supplementing State and local efforts against educational deficiencies and inequalities that are democracy's enemies within.

We may be sure our democracy will not survive unless American schools and colleges are given the means for improvement and expansion. This is a primary call upon the Nation's resources. We dare not disregard it. America's strength at home and abroad in the years ahead will be determined in large measure by the quality and the effectiveness of the education it provides for its citizens.